HUMAN SEXUALITY

RESEARCH PERSPECTIVES

IN A WORLD FACING AIDS

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Le Centre de recherches pour le développement international, société publique créée en 1970 par une loi du Parlement canadien, a pour mission d'appuyer des recherches visant à adapter la science et la technologie aux besoins des pays en développement; il concentre son activité dans six secteurs : agriculture, alimentation et nutrition; information; santé; sciences sociales; sciences de la terre et du génie et communications. Le CRDI est financé entièrement par le Parlement canadien, mais c'est un Conseil des gouverneurs international qui en détermine l'orientation et les politiques. Établi à Ottawa (Canada), il a des bureaux régionaux en Afrique, en Asie, en Amérique latine et au Moyen-Orient.

El Centro Internacional de Investigaciones para el Desarrollo es una corporación pública creada en 1970 por el Parlamento de Canadá con el objeto de apoyar la investigación destinada a adaptar la ciencia y la tecnología a las necesidades de los países en desarrollo. Su actividad se concentra en seis sectores: ciencias agrícolas, alimentos y nutrición; ciencias de la salud; ciencias de la información; ciencias sociales; ciencias de la tierra e ingeniería; y comunicaciones. El Centro es financiado exclusivamente por el Parlamento de Canadá; sin embargo, sus políticas son trazadas por un Consejo de Gobernadores de carácter internacional. La sede del Centro está en Ottawa, Canadá, y sus oficinas regionales en América Latina, Africa, Asia y el Medio Oriente.

This series includes meeting documents, internal reports, and preliminary technical documents that may later form the basis of a formal publication. A Manuscript Report is given a small distribution to a highly specialized audience.

La présente série est réservée aux documents issus de colloques, aux rapports internes et aux documents techniques susceptibles d'être publiés plus tard dans une série de publications plus soignées. D'un tirage restreint, le rapport manuscrit est destiné à un public très spécialisé.

Esta serie incluye ponencias de reuniones, informes internos y documentos técnicos que pueden posteriormente conformar la base de una publicación formal. El informe recibe distribución limitada entre una audiencia altamente especializada.

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HUMAN SEXUALITY: RESEARCH PERSPECTIVES IN A WORLD FACING AIDS

Background papers and reports of a workshop held at
International Development Research Centre,
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Edited by
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Introduction

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In June 1989, IDRC sponsored and hosted the Research on Sexual Behaviour Workshop. The Workshop was intended to complement the Vth International Conference on AIDS that was sponsored by IDRC, Health and Welfare Canada, and the World Health Organization in association with the International AIDS Society. This publication is based on papers that were commissioned for the workshop and reports that emanated from it.

The workshop had its genesis in January 1988 when the Centre, cognizant of the challenge that AIDS was presenting worldwide to individuals and communities, set about to develop a Centre-wide position on AIDS research. An AIDS Committee was formed with representatives from Communications, Health, Information and Social Sciences divisions of IDRC, and recommendations were sought from Centre staff concerning research priorities.

In keeping with the Centre's traditional emphasis on the human rather than technological approach to development through research, sexual health evolved as the main policy focus. This focus recognized AIDS as a sexually transmitted disease (STD) and acknowledged that the myriad nuances of sexuality need to be better understood if AIDS and other STDs are to be effectively controlled. This approach was felt to be important because of its wide application, not just to disease but to reproductive health, family planning initiatives and the overall health of individuals and societies.

The Research on Sexual Behaviour Workshop was a natural outcome of the Centre's adopted focus. Thus, the workshop was planned and its objectives were stated as being:

- To determine how sexuality research differs from other research;
- To prepare a synthesis of research regarding AIDS and sexual behaviour;
- To decide upon the major research and methodological issues for studying sexual behaviour; and
- To recommend strategies for changing sexual behaviour.

Two separate reports of the Workshop are included in this manuscript report – one dealing with the "product" of the Workshop and the other with its "process." The former gives and overview of the issues addressed, the suggestions made, and needs identified during the 3 days of the workshop. The latter describes the process by which participants from varied cultural and academic backgrounds became a cohesive, innovative, and effective working group. These two reports have been translated from English to French with both versions being included in the manuscript report. All remaining papers are in English with a French summary.

Qualitative and quantitative methodologies of sexual research are explored in separate papers together with discussions of their individual strengths, weaknesses, and the ways in which they complement each other. The effectiveness of AIDS prevention and control campaigns is discussed in a paper that the Academy for Educational Development kindly made available to the workshop. This paper also looks at how the experience and knowledge gained through various other public health initiatives has contributed to our effort against AIDS. These have included campaigns aimed at promoting better nutrition and family planning and at reducing the risk of cardiovascular disease, cancer, and sexually transmitted diseases.

Finally, this manuscript contains three papers that address the current status of sexuality research in countries that are representative of Patterns I, II, and III of the AIDS epidemic. These papers also discuss sexuality research imperatives for each of these regions based on the particular needs and challenges that their varied societies present.

The Research on Sexual Behaviour Workshop was organized by members of IDRC's AIDS Committee and a consultant who coordinated the undertaking. The Committee wishes to thank Professors Roger Boshier, University of British Columbia, and Edward Herold, University of Guelph, for their assistance in the planning and implementation of the workshop. Special thanks are also extended to all those whose full participation contributed to the success of the event and to staff of the Centre's Conference, Travel, and Hospitality Services for their assistance in travel and logistical support.

IDRC AIDS Committee

Shahid Akhtar	Information Sciences Division
Neill McKee	Communications Division
Sheldon Shaeffer	Social Sciences Division
Richard Wilson	Health Sciences Division
Pat Trites	Consultant

When It Comes to Sex: The Process Is the Product

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A workshop on research about sex should be a success. Doubly so if it involves intelligent and caring men and women from different cultures. Unfortunately such a view is overly simplistic and an educational event concerned with sex is as likely to be derailed as one on ponds, puddings or piano playing. Moreover, by 1989, sexual research and attempts to share international perspectives concerning it had become particularly delicate because of AIDS.

Given that by the end of 1989, reported cases worldwide would reach just fewer than 200,000 and estimates of human immunodeficiency virus (HIV)-infected individuals almost six million, the spread of AIDS had created an urgency in May. That sense of urgency was occasioning dramas in which researchers acted in ways not always in line with normal scholarly practice. For example, the "latest" results were being rushed into print, often circumnavigating refereeing and editing procedures. Academics, with an opportunity to broaden their conceptual and cultural horizons, were, instead, grinding old axes and cutting the problem down to politics when the phenomenon required breadth, openness, and sensitivity. Another outcome of the urgency was the apparent willingness of public health and other authorities to mount top-down, often authoritarian, programs to "control" AIDS. At one level these programs were motivated by altruism but, at another, they provided authorities with new opportunities to control an already oppressed populace. By 1989, it was clear that sexuality, AIDS, and all the corollaries were a matter not solely for public health authorities but for people around the globe from many sociocultural contexts where different power relationships exist. In this respect the International Development Research Centre (IDRC) of Canada, which funds research by and for developing countries, was well-placed to make a contribution.

International Development Research Centre

IDRC, while financed by the government of Canada, has an international board of governors, and it had just published a pamphlet on AIDS, clearly laying out its philosophy on sexual health and research. AIDS, says the pamphlet, is not just a health problem but a phenomenon with profound social, political, and economic effects. AIDS is a tragedy for both individuals and nations and constitutes a threat to national stability, growth and survival of families. Because AIDS strikes individuals, IDRC's traditional emphasis on the human and social, rather than on the technological aspects of development, was particularly appropriate. In view

of this it was not surprising for IDRC to construe AIDS within a broad framework of sexual health. The concept of sexual health deals with emotions and behaviour; it accommodates many factors normally gathered under the rubric of reproductive health and includes sexually transmitted diseases (STDs), of which AIDS is one. Research within a sexual-health framework would encompass social and cultural determinants of sexual behaviour and health education. As the IDRC brochure noted, "in the long run ... this approach will have greater impact on both the AIDS pandemic and the incidence of other sexually transmitted diseases than would a narrower, technological focus."

There is no independent unit within IDRC that deals exclusively with AIDS or sexual research. IDRC has divisions that support research in Agriculture, Food and Nutrition Sciences; Communications; Earth and Engineering Sciences; Information Sciences; Health Sciences; and Social Sciences. There has been an attempt to create a structure congruent with the social ecology of AIDS and sexual health that cuts across divisions of IDRC. Thus, research projects are worked into division budgets and the Centre is advised by a committee whose members are drawn from each of four divisions.

This provided an organizational framework for the workshop described here. Each division at IDRC represented on the AIDS committee is guided by an ideology that, to some extent, distinguishes the Canadian attitude toward "development." Each division has much to contribute. IDRC accords priority to research that addresses power relationships, attempting to avoid top-down research where problems and methods are imposed; it tends to favour *participatory* or *grassroots* approaches.

Central to the IDRC ideology are notions of power (who owns the research?), control (what will be done with the results?) and empowerment of indigenous researchers (what will be left when this project is finished?). In other words, IDRC operates within broad multidisciplinary perspectives.

The IDRC ideology and overall ethos are congruent with some of the conceptual frameworks that shape modern adult education. At first, the task of organizing a workshop under the aegis of IDRC seemed simple. Participatory techniques would be appropriate; those of us who were planning the meeting would ensure that all voices were heard and that there was a critical and intellectually stimulating edge to proceedings. The joy of sex would not be lost under the weight of pontification, endless socializing, or the polite rituals of intercultural encounters. Sex is basically an uncomplicated matter, but organizing a three-day workshop on sexual research was not that easy.

The Planning

In January 1988, Ivan Head, President of IDRC, sent a memo to all divisions drawing attention to the AIDS crisis and suggesting that there be a centrewide response. Each of four divisions – Information Sciences, Communications, Social Sciences, and Health Sciences – nominated a person to the AIDS committee, which, throughout April 1988, worked to produce a policy for IDRC on AIDS. In May, a consultant was hired to assist the committee, and, shortly thereafter, the decision was made that IDRC would host an event to precede the international AIDS conference in Montreal, 4-9 June 1989. At this stage, what the shape of the event would be, who would be involved and how it would be organized to reflect the ethos of IDRC were not clear.

A satisfying educational event runs smoothly, is enjoyable, and tangibly improves people's understanding of a subject. But the planning and execution of any educational event, whether a workshop, seminar, panel discussion, or conference, is not necessarily a rational, technical matter. The language used by organizers usually says much about their ideology and assumptions. In this case the event was billed as a workshop. In most parts of the world, a workshop is a place where people go to work. They make something – often in an egalitarian atmosphere. It is not the same as a "conference" or "symposium."

Once the AIDS committee decided to hold a workshop, papers had to be commissioned and participants contacted. Staff at IDRC's regional offices were asked to provide the names of men and women who, to them, appeared to be articulate and committed to sharing their knowledge of sexual research.

They provided some names, and others were secured through personal contacts and reference books in libraries. The AIDS committee wanted, and

eventually got, a participant group that was more or less balanced by gender, region, and profession.

After background papers had been commissioned, and potential participants contacted, the IDRC AIDS Committee decided to recruit an animater to lead the workshop that would be held in Ottawa. The purpose of the workshop was to:

- Help IDRC identify issues pertaining to the future of its sexual research program, and
- Provide a forum wherein scholars from the Third World could interact, make contacts and position themselves to mount coherent research programs.

At this time the shape of the event was not clear and there was apprehension about whether it would be possible to avoid pitfalls associated with educational events. Various interests were already clamouring for a place on the program, participants wondered if this was to be a "paper presenting" conference, there was already evidence that "western" approaches to research, most notably the assumptions associated with logical positivism, were in ascendancy.

As the program plan emerged, however, the AIDS committee sought methods congruent with the objectives that had been set. A plan that permitted one gender to dominate or one that ascribed undue importance to the validity of any one approach to research would clearly jeopardize the chance of attaining objectives that called for dialogue, mutuality, respect, and participation by all.

The committee agreed that the participants would be actively involved and the assumptions and techniques of popular education would be used. Thus, participants would draw, act, sing and be in charge of the agenda. Findings, recommendations or guidelines would emerge, but the processes would also be a product.

This notion evoked another source of concern. Popular education is usually conducted in informal, modest, community environments. This event was to be held in the boardroom and lounge at IDRC (Ottawa, Canada), which was clearly designed for official and formal purposes. Ironically, some of the best adult or popular education occurs in environments where there are scant resources and the group has to rely on each other. Hi-tech environments are often disabling rather than enabling and serve to reinforce the interests of elites.

The 38 participants in the sexual research workshop were all competent and intelligent professionals, but even the most casual observer could see that the lounge and IDRC boardroom could be intimidating. In the boardroom was a long table with microphones and at one side were booths for simultaneous language interpretation. In the lounge were overstuffed chairs and, on the walls, pictures of various illuminaries and tapestries. It looked like a place for prime ministers and archbishops. It did not look like a place where flipcharts and the other flotsam and jetsam of popular education could be hung. It did not look like a place where the word "sex" could be uttered with conviction. Even though no headmaster was visible, the sense was that he (and certainly it would be a "he") would be just around the corner.

Fortunately, IDRC has a strong conference-support staff, and we were able to transform the lounge into a setting more suited to popular education. The illuminaries were gently taken off the wall, the tapestries stored, furniture moved, space created and, in a culinary and symbolic gesture, the boardroom table was converted into a dining hall. Later the participants would munch pickles and eat grapes here. We found that sticky tape did not damage the silk wallpaper, and the illuminaries went, without a word, to the storeroom. But would it all work?

The Arrival

By the time we gathered in Ottawa, 31 May, all participants had been told this was not a paper-presenting conference, although the prepared texts would be published later as part of a report on the proceedings. By evening, most had reached the sixth floor lounge in IDRC. After the usual opening pleasantries, all were asked to sit in a circle and introduce themselves to their neighbour. During this introduction they were to reveal two public (i.e., well known) and two private things about themselves. It was a loose and interesting opening to the workshop. Each person introduced his or her partner, and it was clear IDRC had assembled people of formidable intelligence, experience, wit, and insight. By the end of the first hour, fears about possible power imbalances abated like the tide. The women were assertive and forthright and this augured well for the days to follow.

Circles mean different things in different

cultures, but adult educators like them because they denote reciprocity and balance in power relationships. The careful leader will sit in different parts of a circle so participants cannot develop a head table or deferring mentality. By the time we completed the introductions it was clear this would be a participatory event.

Next morning, participants were asked to draw a picture of themselves doing whatever it is they normally do in their home country. In some pictures, the participant was in an office; in others, an open field. In some the participant was a prominent part of the landscape; in others small. Participants were seated in groups that had been deliberately structured to ensure heterogeneity. Each group contained roughly an equal number of men and women, people from developing and industrialized countries, and where possible, varied epistemological viewpoints.

Participants showed their pictures to each other and, by way of introduction, explained the significance of its elements. Later, these pictures were hung on the wall along with the business cards of those who had them (about one-third had a card).

In the "red" circle were participants from Uganda, Zaire, the USA, Dominican Republic, Gambia, and Canada; in the "blue" were people from the USA, Zimbabwe, Thailand, Brazil, and Canada; in the "yellow," from Canada, Senegal, Sudan, and Colombia; in the "black" were participants from the Philippines, Tanzania, Brazil, Nigeria, the USA, and Canada; in the "green" were people from Tanzania, Mexico, the USA, Switzerland, Kenya, and Canada. In the "white," people from India, the USA, Canada, Brazil, Nigeria, and Uganda.

After the introductions, the objectives of the workshop were explained. Participants were assured that all perspectives would be sought and they had control of the agenda. The nuances of the different sociocultural contexts were acknowledged as an essential backdrop to any discussion or findings that would emerge from the workshop. Work then began on the only part of the agenda that had been set in advance. This concerned the first and most critical theme – the social context for sexual research.

Context for Sexual Research

The first work for the groups was to search for answers about how sociocultural context shapes sexual research. Sexual behaviour is always enacted in a social context; thus, the AIDS epidemic is as much a social and behavioural phenomenon as it is a biological one.

The facilitator had prepared instructions. These cautioned against adopting the approach used by logical positivists who downplay contextual variables and attempt to introduce what works in one context into another. This approach had been as unsuccessful, according to the facilitator, as that of the phenomenologists who are so enamoured with context that their work sometimes has little utility.

Participants were then instructed: "During this phase of your work your task is to:

- Develop a model ... that lists (and advances our understanding of) the ... contextual variables (e.g., political, social, cultural, economic) that shape the character of research on sexual behaviour.
- Provide examples of the way in which these contextual variables operate, or manifest themselves, in different parts of the world, with respect to the framing of the research question, data gathering, analysis and the drawing of conclusions."

Groups were also asked to present their findings in imaginative and interesting ways that would engage other participants.

Some presented them as a televised news show; others used skits and role playing. Some created games that involved the audience; others drew pictures; some were asked to write and perform a song or operetta and so on.

Groups were exhorted to use reporting processes congruent with what they were trying to say. In this way, the workshop content and processes would become one; participants would be educated and the inexorable pull of jetlag and fatigue would be overwhelmed by brilliance.

To a large extent, this process worked and what resulted was a congenial and provocative montage of cultures and wit.

The first group presented an interview between a university ethics committee and a researcher attempting to embark on a program of research in the Philippines. The research would be done on an American naval base where questions about frequency and sex position mingled with concern about the extent to which sex was "being used as part of a program of world domination."

This group introduced the notion of contextual layers, and it soon became clear that the researchers they portrayed faced immense problems. Their methods were vulnerable: they had not prepared for the low literacy rate in the area nor had they realized how private and steeped in religious and other values were the issues they intended to probe in this part of the world.

The next group simulated a television show involving a model of galactic sexual behaviour. The model was bounded by macro-level cultural factors and, at the micro-level, involved cultural processes that encode sexual fantasies. This was a multivariate analysis that in a graphic and entertaining form portrayed macro- and micro-level variables that constrain and enliven sexuality research.

The next group presented three skits showing ways in which context can imperil the reliability and validity of data collected during sexual research. The skits embodied differential attitudes toward sex with animals, culturally determined and more universal aphorisms about contraception ("mum says don't go out without your rubbers") and difficulties associated with securing data about taboo topics like female masturbation and orgasm.

Next was hilarious role playing about what happens when interviewees misunderstand what an interviewer means by phrases like penile penetration, oral sex, rear entry, or sexual orientation. This report evoked a key discussion about phenomenology and meanings. One participant recalled how an Asian researcher had collected data on "virginity" from Hong Kong and Thailand only to later realize that the term means different things in those places. This example prompted a discussion about the extent to which cultural relativism threatens the ability of researchers to achieve external validity – and generalize findings from one context to another.

The next group elaborated the theme by staging an interview between two sex workers and three interviewees. This resulted in discussion about how the meanings attached to variables are construed by researchers and subjects, leading further to discussion about "subjects" and ways in which interviewees distort responses to maintain control of their own sexuality. As a participant from Latin America observed, sex is power and knowing secrets about another person gives power. "Meanings" are to do with coding – smelling, feeling and touching, but not telling. Researchers somehow have to find codes the same as the ones used by those being studied. The most satisfying interview involved the researcher saying "Let me tell you something about myself...."

The following group simulated an international project where they contacted several countries and requested permission to do research on sexual behaviour. In reply, the "ministers" in Cuba, Zambia, Panama and other places asked, for example: "What will it do to tourism?" "Will it improve our sex?" "Will there be any foreign exchange?" This simulation focused on the sociopolitical context and the way it shapes or constrains sexuality research, whereas other groups had focused on methodological problems or the ways that cultural meanings can distort responses and damage validity. This group clearly showed how attempts to study sexuality inevitably interact with social, political, and economic problems. In some places, religious values, and their role in the political process, greatly inhibit the ability of researchers to work. In other places researchers must recognize and respond to the demands of corrupt officials. In many countries, researchers must deal with fundamentalism of different kinds and a body of opinion that equates sexual research with promiscuity and with attempts to dismantle the foundations of society.

What emerged from this group work was that some constraints are universal. Although their form and intensity vary, they are everywhere and sexuality researchers have to tread carefully through sociopolitical minefields.

After each group concluded its report on the context for sexuality research, a rapporteur summarized the primary themes, the extent to which the group covered material or voiced perspectives that had meaning in the rapporteur's cultural context, and the extent to which they had advanced the argument. We attempted to choose rapporteurs with varied perspectives and ensured that equal numbers of men and women were involved. These reports were usually appreciative, applauded the acting ability of group members, and commended them for their insight. But, more importantly, the rapporteur often brought a new or different perspective to what had been presented, supplementing the material with anecdotes about research. The main theme was the inability of some individuals to appreciate the subtlety of meaning or the viciousness of power elites threatened by nosy

researchers asking questions about sex. The discussion focused and refocused on gender and power and the way in which religious values enhance or erode methodological precision and the validity of results. "Well-meaning" Christians interviewing Muslim women in Africa have about as much success as researchers identified with government authorities seeking respondents' cooperation in Latin America. Clearly, the context for sexuality research is critical, and people attempting to monitor the spread of AIDS had better have adequate regard for the social ecology in which it occurs.

This probably calls for multivariate conceptual frameworks and methods sensitive to interactions involving multiple layers of variables. It probably also calls for conceptual frameworks that accord high priority to subjective experience and meanings as well as so-called objective realities or facts. In any event, an overly biomedical approach not grounded in the social ecology of those studied and, for that matter, those doing the study, will not suffice.

This opening session demonstrated how the context in which research is done influences the way problems and questions are framed, determines the appropriateness of various methods and provides conceptual anchors that hold the analysis together. Sometimes, the later groups repeated the work of the early ones, but the animater resisted the temptation to ask any group to waive its presentation. Thus, all voices were heard, and the notion was reinforced that this was a participatory workshop committed to hearing all perspectives. Despite some repetition, we were exposed to a comprehensive analysis of multiple contexts. Some groups saw the context for research as essentially immutable. Others saw the context as inextricably bound up with power relationships, and they perceived sexuality research as an instrument for change. The plethora of perspectives so early in the workshop created an appropriate atmosphere for discussions on the practical problems associated with doing sexuality research.

Before participants retired for the day, they received a set of blue cards for their suggestions on agenda items. Most completed three or four cards. In this way, we secured 70 agenda items.

A selected group of participants, the workshop facilitator, and members of the AIDS committee took the items to the boardroom and sorted them into a-priori groups or categories – research design (including sampling); measurement (including reliability and validity); conceptual issues; target groups; dissemination (of research findings); behavioural change; and resources. These became the basis of the agenda for the rest of the workshop.

Women on the Move

As participants assembled for the Friday morning session, much discussion turned on a report in the *Globe and Mail*, the gist of which was that 40% of condoms sold in Canada are defective. Concern had already been expressed that certain manufacturers market a leaky and inferior product to the Third World, dumping defective condoms where they would not face legal repercussions. Later we learned that *Consumer Reports* had surveyed 3300 readers for the March 1989 issue, and about one in four respondents reported that a condom had broken in the previous year. This led the magazine to conclude that one in 140 condoms breaks but that certain behaviours, such as anal intercourse, are "particularly punishing." The control of sexual behaviour is inextricably intertwined with ideology, culture, profits and power, and, in this regard, Canada seemed to be much like every other country.

Early in the day's work, an event changed the life of the workshop: a sexologist announced that one group would consider female sexuality. Some participants, she said, had been recruited but others were welcome. This turned into a large, vibrant and intellectually stimulating group, and their initiative permitted many participants to claim a place on the agenda. From the organizers' viewpoint, this welcome development had several effects on the remainder of the workshop, which became more and more participant-directed. From now on, coffee and other breaks just happened: no announcements were needed. Reporting became fluid, variegated and, in many instances, funny. There was constant reference to theory, the earlier work on context was not forgotten, and the rapporteurs usually added depth to the analysis. The noise increased, the level of debate grew, people listened intently, and participants liberated both the boardroom and the workshop. IDRC staff in the nearby corridors sensed that something significant was going on, and, throughout the day, curious heads popped through various doors.

For the morning, groups were structured around "women and sexuality," "measurement," "dissemination of findings," "research design," and "behavioural change". By lunchtime, the women-and-sexuality group had constructed a model with variables that influence the framing of research questions and the appropriateness of various methods. Variables were classified as constituting "input," "channel," and "output." Examples in illustrating the power of the model were drawn from skits and role playing from the previous day. The group maintained that sexuality researchers have not paid enough attention to fantasies that constitute a language. Is there an archetypal language common to all cultures? If so, it is not verbal. Thus, the educator or researcher should be willing to use puppets and other devices that "speak" in different ways.

Some African participants commented that the recommendation for monogamy as a means of AIDS prevention has been interpreted in a more culturally acceptable way as a recommendation for "zero grazing." "Zero grazing" refers to staying with one's regular sexual partner or partners. Within this context, the roles of African women were debated. A discussion ensued on the need for the empowerment of women and a focus on the various aspects of female sexuality – for example, pleasure as well as reproduction.

Some participants spoke about the history and mythology of genitalia and the way in which cultures linked the presence of a protruding penis with influence and power and the absence of a visible organ (in women) with submission and weakness. Discussion revealed that the basic elements of this analysis are still present where sex for pleasure has historically been distinct from sex for reproduction. The notion that only men may have sex for pleasure, and that women depend on men for their pleasure, is deeply rooted in many cultures.

Although education is giving more women instruments to lessen dependence, as long as mortality among children is high in some parts of the world, the men will seek to have children with many women. Moreover, according to one participant, the nouveau riche in parts of Africa display their status by having lots of wives and children (the last of whom should be male).

As we broke the sessions for lunch, the director of IDRC's Health Sciences Division wondered if today's progress could have been achieved without the role plays, skits and other events of the day before. In educational events like this could it be that the process is the product?

Working Together

In the afternoon we heard from each of the work groups, and the connections between theory and practice became more explicit. People opened up about what one West African characterized as ideological tensions (in short, equilibrium and conflict perspectives). The earlier work on the context for research took on deeper, more culturally relevant meanings.

Research Design

The AIDS pandemic has led to dubious claims that masquerade as research. Authorities are looking for a quick fix, and some researchers have been happy to jettison the normal canons of scientific inquiry in their willingness to oblige. For example, actions have been introduced in studies where no capacity exists to ensure internal validity; yet causality is attributed to the action which is often an advertising or "information" campaign. In this phase, two groups focused on aspects of research design. In many respects, their reports were complementary.

The first canvassed many of the issues broached in the background papers and evoked a discussion concerning the difference between participatory research and participant observation. Participatory research is anchored in the ideology and assumptions of popular education and, for more than a decade, has been the dominant ethos guiding the work of the International Council for Adult Education. There is a conscious attempt to eliminate distinctions between "researcher" and "subject."

The Third World is littered with research projects that were owned by outsiders and enabled them to obtain a degree or rewards within their cultural context; such projects led to a deterioration in, or made no difference to, the lives of research "subjects." Participatory research is designed to rectify this situation.

The researchers and subjects, who are usually the same people, own the research and ensure that it leads to discernible improvements in their lives. Good examples include the historical research done

by Bombay street dwellers or the reproductive health research projects under way in many parts of Latin America, including the barrios around Santiago, Chile. Participatory researchers operate from within phenomenological frames of reference and claim there is no such thing as neutral researchers or research. Claims of neutrality, such as those made by positivists, are, in themselves, manifestations of an ideological orientation, although positivists attempt to conceal their ideology. In contrast, participatory researchers make it explicit. For them, research, where the researcher has resources and power, is usually designed to reproduce existing inequalities, whereas participatory research, by definition, confronts oppression and inequality. None of this should be confused with "participant observation" such as when the anthropologist lives in and observes life in the village.

Participatory research having been distinguished from participant observation, attention turned to variables that determine research design. The second group reporting on design noted that, because of the intensely private nature of sexual practices, preliminary data are probably best gathered through some procedure less invasive than a large-scale survey. Moreover, by "triangulating" on data and using local collaborators to frame questions in culturally meaningful ways, it is possible to overcome some of the difficulties associated with securing reliable and valid data.

A question about how representative a sample should be for a "target" (e.g., at-risk) population stimulated discussion about individualistic (usually psychologic) research versus more collective data (within anthropological frameworks). In adult education and other fields there is a trenchant critique of the ideology of individualism, which is the centrepiece of North American research where a capitalist economic system places a high priority on the individual and his or her "rights." Critics claim that researchers whose work is informed by an ideology of individualism are so enamoured with measurement and fitting people into their (usually elite) version of the good society that they obscure macro-level (more sociological) variables that determine patterns of power and privilege.

The ramifications of this view were present throughout the workshop. With few exceptions, the background papers had been oriented in an individualistic frame of reference. But the Western preoccupation with measurement, reliability, validity and all the other elements that please university examiners and grant-givers was not necessarily the major priority of participants from developing countries. The AIDS pandemic (and sexuality) is tightly woven into patterns of sociopolitical culture and control, with so-called traditions – such as the male "right" to have sexual relations with many women or the female disfigurement in clitorectomy in Africa – being instruments of power, privilege, and control.

Measurement

The group discussing measurement produced an agenda for research, the first item of which was to design a measure of risk – with cross-cultural applications – for HIV infection. They also saw the need to validate instruments for use in countries with limited resources. Given that the total budget assigned to health in some countries does not equal even the daily allocation in others, this will be a challenge. In countries where no data have been collected about sexuality, where does one start and with what? One starting point might be to develop culturally relevant measures of sexual pleasure and health status.

Female Sexuality

The group dealing with female sexuality was adamant that an integrated approach was needed, that the reproduction function of women had too long been viewed in most of the world as incompatible with sexual pleasure. This group viewed research as action that, at times, is difficult to distinguish from politics.

One participant noted that most of the ideas on agenda items put forward by the group encompassed sexual pleasure – undoubtedly because participants at the workshop were of high socioeconomic status.

Discussion that followed this report focused on ways to code messages that were aimed at prompting behavioural changes to prevent AIDS. Some aphorisms – such "wearing a condom is akin to taking a shower in a raincoat" – seemed to be universal. However, other myths and beliefs, such as those concerning the way the penis is historically valued are not necessarily universal and can greatly

influence AIDS prevention. In some cultures, the fact women have no penis is interpreted as evidence that they are not entitled to pleasure; in other places the fact the condom is designed to cover the penis is interpreted as diminishing the man and his organ. Some members in this group claimed that "telling" men about these things is less effective than "persuasion and seduction" and that it is possible to please men "without diminishing them." They said that, in Latin America, *machismo* means "the men have to perform," and it discourages information sharing among women for fear of losing their partners to another woman. Someone also claimed that if women became too liberated, they would become like men. In this regard, it was noted that every time a behaviour changes, it modifies the social ecology of sexuality so both men and women must participate in negotiations concerning sex.

Dissemination of Research

In the report on dissemination of research findings, one participant commented that much research about AIDS in Africa is published outside Africa. Others said that academic orthodoxy forced researchers to do "one type" (usually grounded in positivism) of research and, because of the publish-or-perish syndrome and its corollary "vitae stuffing," most relevant research never reaches the people who need it most.

Participants added that, in some respects, sexuality researchers in Latin America or Africa have been academically colonized. For example, the penchant for focusing on pure (as compared with applied research) may enhance the researcher's career but does not empower the research "subjects" or upset power structures that perpetuate oppression. Moreover, in some societies, oral traditions are significantly more important than publishing written papers.

The dissemination group tried to incorporate these kinds of concerns in their model that classified research types and the timing of dissemination efforts. Along a horizontal axis were three types of research – blood tests, general population studies, and behavioural studies. Along the vertical axis, they distinguished between the aims of each type of research, the targets for dissemination of results (who receives them?), the dissemination processes to be employed, and, finally, the channels to be used for dissemination.

As a result of these and the later deliberations in Montreal at the AIDS conference, a "sex network" was established to help workshop participants and others maintain contact with each other and to facilitate the exchange and distribution of information. The network was anxious to identify existing databases on sexuality research, find out about the sexual health needs of people in different regions, and develop a generic (or model) research proposal. Most importantly, the members agreed to begin work on a series of country reports about human sexuality research based on existing literature, secondary analysis and unpublished materials.

Behavioural Change

On the surface, the best strategy to attain and maintain sexual health is to change behaviours that put one at risk. But behavioural change occurs within broad sociocultural frameworks. For years, public health and other authorities have tried to get people to change behaviours that put them at risk. In Canada, for example, they have urged wearing seatbelts, limiting dietary intake of fats, avoiding tobacco and alcohol, and exercising regularly, but their efforts have met at best with varied success. Throughout the 1950s, "communication" programs designed to reduce birth rates were a spectacular failure. Yet, some countries – like Singapore – have successfully used "public education" campaigns to bolster productivity, courtesy, speaking Mandarin at work and to eliminate smoking, littering and socially obnoxious behaviour. In this regard, it is crucial to distinguish communication from information and from education. Information campaigns sometimes resemble throwing water at a bottle. A few drops go in, but most land on the floor. Education is reciprocal, and those who attempt to use it should have more regard to power and control issues than has been the case in programs anchored in a traditional communications paradigm.

When one person or group sets out to change another's behaviour, a power relationship is established. In some parts of the world, authorities simply impose their will on the populace, with penalties – sometime even death – for noncompliance. The result has been a growing resistance to messages or information that emanate from government sources. In places where "campaigns" are common, an air of cynicism ("here

they go again") prevails.

Messages about sexual health or behavioural change have to use easily recognized "codes" congruent with the sociocultural context in which they are used. In this regard, participants discussed several public-education campaigns about AIDS that seemed to be particularly imaginative and culturally relevant. Each country had had its successes and failures, but materials associated with the "integrated" attack on AIDS in the UK, the Dutch film that shows two sexually attracted young people in an embrace moments before coitus (during which each "sexual history" is displayed), the New Zealand condom commercial showing a skydiver ("... would you jump out of an airplane without a parachute?") were all noteworthy. Fear can evoke an initial interest but often cannot sustain behavioural change.

Sexual research in some countries has been inhibited by problems in securing baseline data. Moreover, acute ethical problems are associated with implementing a time-series design where treatments are implemented and then withdrawn.

Condom Politics

When participants gathered on Saturday morning, we had traversed enormous ground in the previous three days. Despite jetlag and fatigue, no one had snoozed in the back, and even the best-informed participants had learned new things and were astonished by the way sexuality varies as a function of culture. Most importantly, theory had danced with practice. We had discussed practical obstacles associated with doing sexuality research and, in the next breath, had grappled with complex and, in some respects, intransigent theoretical issues. Most discussions had a critical edge, and many participants claimed that the planning and execution of a sexuality research project almost always poses a challenge to the status quo. Thus, discussion frequently dwelt on the politics of research and the notion that research, education or change, is not neutral; it is heavily imbued with assumptions and ideology.

Throughout the previous three days, participants had more or less couched their discussions within the framework of sexual health conceived by IDRC. By Saturday morning, however, the sense was that we should narrow the discussion and use the resources of the group gathered in Ottawa to advance our understanding of a single issue. The AIDS pandemic had provided a backdrop to earlier discussion, but, by Saturday, participants wanted it at centre stage. AIDS and condoms became the issue.

Most participants wanted to discuss "condom politics," so two groups were formed for this. Two other groups were formed to consider "capacity building" and a "research agenda." The notion of praxis (reflection followed by action) and the ideology of participatory research and popular education had informed earlier discussions and guided the consideration of condom politics. In parts of Latin America, research on condom use is being touted as work on "AIDS prevention" (and was thus referred to as a red herring). Also, the male penis is referred to in public health programs as a "little bird." Socially responsible "little birds" are supposed to wear hats – or condoms. Thus the first "condom" group that met in the boardroom was known as "praxis and the red herring"; the second or "little bird" group met in the lounge.

Condom Praxis

The first group listed factors pertaining to condom use, created a fictitious country ("Fictiocia") and tried to develop a condom marketing and promotion strategy. In some respects their discussion encountered familiar sociopolitical and theoretical conundrums. There were struggles with language. Marketing and promotion denote a top-down communications paradigm. What are the merits of this compared with a grassroots, community-controlled educational paradigm?

The "adoption" of condoms was thought to result from complex interactions between many contextual, sociopolitical, cultural, and individual variables: What do people "know" about condoms? What are the dominant sexual fantasies in the culture? How do such images pertain to condoms? Have people learned to incorporate condom use (putting it on, for example) into sexual play? What is the role of the church? Will condom promotion be eroded or countermanded by the church? Does the government think that tourism will be threatened if people talk openly about condoms? To what extent is fundamentalist thought and behaviour a characteristic of this place, and do the leading politicians think condom promotion will "loosen" sexual mores?

Participants thought the "dominant meaning" of sex would be a crucial determinant of condom adoption. In many parts of the world the prevailing ethos is for women to engage in sex for reproduction, not pleasure. Clitorectomy, as practiced in parts of Africa, is regarded as a radical manifestation of this ethos by some and part of the traditional "immune system" by others. Participants felt that local rather than national campaigns would be best able to prompt condom use.

Attention then turned to socioeconomic factors and condoms. Some participants claimed that foreign manufacturers "dump" defective condoms in the Third World. At least one large country does not permit the importation of foreign condoms, but the local industry has little quality control.

The stigma or stress associated with acquiring condoms should be eliminated, said the group, who also noted that condom use has to be construed within ecological frameworks.

In several countries the first step in AIDS prevention and condom promotion is to pave the roads. If condoms are not moved efficiently, they sit on warehouse shelves, become brittle and lose their lubrication.

In other countries the most crucial variable in condom promotion is corruption. "Nothing moves unless the high officials get something out of it," said one participant.

Participants then considered problems associated with large-scale condom use. Asked one: "What will happen if millions of people use condoms; what do we do with billions of used condoms filled with infected sperm?"

In Japan, where condoms are widely used, architects and plumbers are having to deal with apartment pipes blocked by hundreds of condoms. Septic tank users cause immense problems if they dispose of condoms in toilets and, in rural settings, villagers are being exhorted to use lime pits at the back of the house.

Some of the images used in the attempt to market condoms in Fictiocia were amusing, but the work ended on a sombre note. Participants agreed that an entire sexual culture must be changed. "Our kids will not enjoy the same freedom we have had," claimed one participant. Moreover, condoms are changing the meaning of trust, for couples who lie to each other about their sexual history can reap awful consequences.

Underlying the discussion was a feeling that condoms create an illusion of safety and that high-risk sex is the final expression of independence for poor and marginalized people. In nihilist youth groups, high-risk sex is no different from driving a car when drunk, taking life-threatening drugs, or engaging in other behaviours widely regarded as antisocial by those with an investment in the status quo. Moreover, many young people regard themselves as immortal and thus immune to sexually transmitted diseases. AIDS is increasingly a problem of the poor and marginalized who have learned to doubt the veracity of any message that emanates from government or other "authorities."

The second condom group traversed similar ground but, in addition, focused on difficulties that erode promotion campaigns. How can condom advocates overcome the widespread belief that condoms diminish sexual pleasure, especially when so many condoms have defective lubrication and hurt women? Even more formidable is the fact that in many cultures men regard condoms as an insult to their masculinity or a barrier to a complete psychologic relationship. Thus, in some places, men respond to exhortations to wear a condom but cut off the tip so the relationship is "complete."

The second group identified numerous researchable problems in condom politics: What strategies can be used to involve women in decision-making about condoms? What can be gained from a comparative study involving countries (e.g. Japan) that have been successful in promoting condoms? How can condom manufacturing, distribution and use be improved? What are the ideological parameters of this problem and how can grassroots participation be assured? Are condoms best distributed by governments, nongovernmental organizations or through some multisectoral approach? When is it appropriate to stop using condoms, to what extent should there be special promotion with parents and young people, and finally, are we – the workshop participants – role models for others?

Closing the Circle

Most of the participants from developing countries took the "sex bus" to the Fifth International Conference on AIDS that opened in Montreal a few days later. Others returned to their place of work. Montreal proved to be a gabfest of unprecedented

proportions, and rumours spread that AIDS activists would attempt to use the meeting to draw attention to their plight. At the closing of our meeting, these events lay ahead. What was needed now was to bring our activities to an end, to complete the circle we had opened four days earlier and to get people ready for their next steps. This would involve two stages – reflection on the last four days and closure.

Five participants from different parts of the world were asked to reflect on the previous four days and to share their impressions with the entire group. One said that before he came to the workshop he expected some people would "dominate." Normally, he said, "we don't get a chance to talk at these events." This was not the case in Ottawa. Everyone had been actively involved. There was an even pattern of participation. IDRC, he said, knew what it was doing and "should organize a workshop on how to organize a workshop." Another said he had brought his Sony Walkman in case the meeting became boring, but he never used it. He said he hoped the "artifacts" of the workshop could be preserved. He pointed at the walls where less than a week earlier IDRC illuminaries had been positioned. They were covered with words, drawings, and other products of the workshop. We had erected a research exchange and, despite our diverse origins, had become remarkably harmonious and task-oriented. The next speaker echoed these sentiments and thanked everyone, remarking that the network of contacts would help. Similarly, the fourth speaker congratulated Canada and IDRC for encouraging people to participate in the workshop and the international conference to follow. Finally, IDRC's Director of Health Sciences, Richard Wilson, thanked participants for their involvement and promised to preserve the artifacts.

We were now in the last minutes of the workshop. Furniture was pushed back, participants stood and formed a circle in the same way we had done four days earlier. We were now at ease with each other.

"When we met here four days ago we were strangers," said the workshop facilitator. "Friendship and solidarity are corollaries of learning .... In all our diversity we are now friends. ...

"Look at the people in this circle. They are your friends. Make eye contact with each of them. You will not see each other for a while. Look at them now ..."

After a few minutes.

"Now take three paces back ... pause ... look around this circle again....

"Now walk inwards ...."

Participants walked forward into a huddle.

"Now step back ...."

The participants stood in a large circle, some quite close to the walls, far from each other.

"Now turn and face the wall ....

"Although this has been an enjoyable experience, you now have to disengage from this group. There is work to be done. At home. At your place of work. For some of you, in Montreal. Take a few minutes now. In silence. Think about where you go from here. The next steps ...."

The participants were silent. The only noise was from a few cars 14 floors below in the street. A minute went by. Silence. One-and-a-half minutes. Still silence. Two minutes ....

"Thank you very much."

The workshop was over.

En matière de sexualité, les moyens sont une fin en soi

Roger Boshier, *professeur à l'éducation des adultes, Université de Colombie britannique, 5760, rue Toronto, Vancouver (Colombie britannique) Canada, donne un resumé des activités de l'atelier qu'il animait.*

Les chances de succès d'un atelier portant sur la recherche en matière de sexualité sont excellentes, surtout si on fait appel à des femmes et à des hommes intelligents, issus de diverses cultures. Malheureusement, une telle vision des choses est par trop simpliste, et une rencontre où l'on étudie la question de la sexualité se prête tout aussi bien à la divagation qu'un colloque sur les marées, la magie ou la mousse au chocolat. Par ailleurs, en 1989, il était plus délicat de mener des recherches et d'amorcer des échanges internationaux en matière de sexualité, vu le spectre du sida.

Il était prévu que vers la fin de 1989, les cas déclarés de sida totaliseraient un peu moins de 200,000 et, selon les estimations, que le nombre de personnes séropositives s'élèverait à peu près de six millions; aussi, en mai, un véritable état d'urgence était décrété a cause de la progression de la maladie. Ce sentiment d'urgence était à l'origine des scénarios dramatiques dans lesquels les chercheurs tenaient des rôles peu conformes à l'activité académique courante. Ainsi, les « plus récentes » données étaient publiées sans que l'on fasse appel au processus habituel d'arbitrage et de révision. Alors que la situation incitait les universitaires à élargir leurs horizons conceptuels et culturels, nombre d'entre eux y ont vu l'occasion de défendre avec opiniâtreté leurs propres intérêts et de réduire à d'insignifiantes questions politiques un phénomène dont l'étude exige largeur de vues, ouverture d'esprit et sensibilité. Autre conséquence de cet « état d'urgence », les autorités sanitaires ou autres semblaient apparemment disposées à lancer des programmes hiérarchisés, souvent d'un autoritarisme marqué, pour « contrôler » le sida. Dans un sens, ces programmes étaient motivés par l'altruisme, mais ils permettaient par contre aux autorités d'exercer une plus grande emprise sur une population déjà opprimée. En 1989, il était évident que la sexualité, le sida et tous les autres phénomènes qui en découlent sont des sujets sur lesquels devaient se pencher non seulement les autorités sanitaires, mais plusieurs personnes de contextes socio-culturels différents à travers le monde où existent divers rapports de force. Dans ce contexte, le Centre de recherches pour le développement international (CRDI), Canada, organisme de financement de la recherche effectuée par et pour les pays en développement, était bien placé pour apporter une contribution.

Centre de recherches pour le développement international

Le CRDI est financé par le gouvernement du Canada, mais ses politiques sont définies par un Conseil des gouverneurs regroupant des membres de la communauté internationale. Il venait de publier un document sur le

sida, exposant clairement sa philosophie sur la santé sexuelle et la recherche. Selon ce document, le sida est non seulement un problème de santé, mais un phénomène aux vastes ramifications sociales, politiques et économiques. Le sida est une tragédie aussi bien pour les individus que pour les pays; il menace la stabilité et la croissance des nations ainsi que la survie des familles. Le sida frappe des personnes en chair et en os. Aussi, l'optique que privilégie le CRDI, faisant porter l'accent sur les dimensions humaines et sociales plutôt que technologiques du développement, est particulièrement indiquée et il n'est pas étonnant que le CRDI envisage le sida dans le contexte plus vaste de la santé sexuelle.

Le concept de santé sexuelle touche à des émotions et à des comportements ainsi qu'à nombre de facteurs normalement classés sous la rubrique santé de la reproduction, notamment les maladies transmises sexuellement (MTS), dont le sida. Envisagée dans le cadre de la santé sexuelle, la recherche prendrait en compte les déterminants sociaux et culturels du comportement sexuel et de l'éducation sanitaire. Comme l'explique la brochure du comité sur le sida du CRDI : « à long terme... cette approche influera davantage sur la pandémie de sida et sur l'incidence d'autres maladies transmises sexuellement qu'une approche plus spécifique, axée sur la technologie ».

Il n'existe au sein du CRDI aucun service particulier qui s'occupe exclusivement de sida ou de recherches sur la sexualité. Le CRDI compte plusieurs divisions qui soutiennent la recherche dans les domaines suivants : Sciences de l'agriculture, de l'alimentation et de la nutrition; Communications; Sciences de la Terre et du génie; Sciences de l'information; Sciences de la santé; et Sciences sociales. Des efforts ont été consentis pour créer une structure interdivisionnaire qui cadre avec la dimension socio-écologique du sida et de la santé sexuelle. De cette façon, les projets de recherche en cette matière s'inscrivent dans les budgets de quatre divisions, qui délèguent des membres à un comité chargé de conseiller le CRDI.

Cela a servi comme point de départ pour l'atelier que nous décrirons plus loin. Chacune des divisions du CRDI représentée au comité sur le sida fonde ses activités sur une idéologie qui caractérise d'une certaine façon l'attitude canadienne face au « développement ». Chaque division a un grand rôle à jouer. Le CRDI accorde la priorité absolue à la recherche portant sur les rapports de force, tentant à éviter les projets de recherche hiérarchisés, dans lesquels problèmes et méthodologies sont imposés. Il privilégie les méthodes *participatives* ou qui se font à la *base*.

Le CRDI s'intéresse aux notions d'autorité (à qui appartient le projet de recherche?), de contrôle (que fera-t-on des résultats?) et de pleins pouvoirs conférés aux chercheurs autochtones (que restera-t-il à la fin du projet?). En d'autres termes, le travail du CRDI s'inscrit dans de vastes perspectives multidisciplinaires.

L'idéologie et les préceptes du CRDI concordent avec les plus importants concepts qui sous-tendent les pratiques modernes de l'éducation des adultes. De prime abord, on croyait qu'il serait facile d'organiser un atelier sous les auspices du CRDI. Les techniques participatives seraient tout indiquées, les responsables de la planification de la rencontre s'assureraient que tous et chacun auraient voix au chapitre, et le tout serait animé par un esprit critique et des échanges intellectuels stimulants. Les joies de la sexualité ne seraient pas occultées par le poids de propos pontifiants, de mondanités sans fin ou du rituel de la politesse propre aux rencontres interculturelles. Bien que la sexualité soit une réalité toute simple, il n'est pas si facile d'organiser un atelier de recherche de trois jours sur le sujet.

La planification

En janvier 1988, M. Ivan Head, président du CRDI, faisait parvenir à toutes les divisions une note de service attirant leur attention sur la crise liée au sida et proposant que le CRDI entreprenne une action collective. Chacune des quatre divisions — Sciences de l'information, Communications, Sciences sociales et Sciences de la santé — nommait un représentant au comité sur le sida qui, durant tout le mois d'avril 1988, a travaillé à établir une politique en matière de sida pour le compte du CRDI. Un expert-conseil chargé de prêter main-forte au comité a été engagé et, peu après, il a été décidé que le CRDI serait l'hôte d'une rencontre préalable à la conférence internationale sur le sida, qui se déroulerait à Montréal du 4 au 9 juin 1989. Toutefois, il restait à préciser la structure d'une telle rencontre et à définir qui devait y participer et comment l'organiser pour refléter les préceptes du

CRDI.

Une rencontre à caractère éducatif doit se dérouler en douceur, être agréable et accroître de façon concrète la connaissance des participants sur un sujet donné. Mais la planification et le déroulement d'une telle rencontre, qu'il s'agisse d'un atelier, d'un séminaire, d'un débat ou d'une conférence, ne relèvent pas uniquement de la logique ou de la technique. Habituellement, le langage qu'utilisent les organisateurs en dit long sur l'idéologie et les fondements de leur démarche. Dans le cas qui nous intéresse, la rencontre a été nommée un atelier. Dans la plupart des régions du monde, un atelier est un lieu où vont travailler les gens. Ils y fabriquent quelque chose — souvent en travaillant en toute égalité. Ce n'est pas la même chose qu'une « conférence » ou un « colloque ».

Après avoir décidé de tenir un atelier, le comité sur le sida s'est occupé de commander des articles et de rejoindre les éventuels participants. Les bureaux régionaux du CRDI ont été appelés à fournir le nom d'hommes et de femmes qui, à leurs yeux, étaient suffisamment éloquents et désireux de faire part de leurs connaissances en matière de recherche sur la sexualité.

Les bureaux ont fait certaines suggestions et d'autres noms ont été obtenus à la faveur de contacts personnels et de la consultation d'ouvrages de référence en bibliothèque. Comme il le souhaitait, le comité sur le sida est parvenu à former un groupe de participants où les divers sexes, régions et professions étaient relativement bien représentés.

Après avoir commandé des articles de fond et communiqué avec les éventuels participants, le comité a décidé de recruter un animateur pour l'atelier qui aurait lieu à Ottawa. L'atelier avait pour objet :

- d'aider le CRDI à cerner certaines questions portant sur l'avenir de son programme de recherche sur la sexualité, et
- de faciliter les échanges afin que les savants du Tiers Monde puissent s'entretenir avec leurs pairs, établir des contacts et tout mettre en oeuvre pour élaborer de solides programmes de recherche.

La forme que devait prendre la rencontre n'était pas encore bien définie, et on nourrissait quelques appréhensions au sujet des embûches qui guettent les rencontres éducatives. Divers intérêts réclamaient bruyamment une place dans le programme, les participants se demandaient s'ils assisteraient à une conférence de « présentation officielle d'articles », et les approches « occidentales » face à la recherche, plus particulièrement les a priori associés au positivisme logique, semblaient déjà gagner en importance.

Néanmoins, au fur et à mesure qu'était précisé le plan du programme, le comité sur le sida était à la recherche de moyens qui cadreraient avec les objectifs établis. Toute initiative qui permettrait à l'un des deux sexes de dominer ou qui attacherait une trop grande importance à une approche particulière en matière de recherche serait manifestement contraire aux objectifs visés, axés sur le dialogue, l'échange, le respect et la participation de tous et chacun.

Il a été convenu que les participants auraient à jouer un rôle actif et que les fondements et les techniques sur lesquels repose l'éducation populaire seraient mis à profit. Ainsi, les participants seraient appelés à dessiner, à chanter, à faire du théâtre et à établir l'ordre du jour. Le tout déboucherait sur certaines constatations, recommandations et lignes directrices, mais les moyens pris pour en arriver là seraient aussi une fin en soi.

Cette optique était source d'autres préoccupations. L'éducation populaire s'inscrit le plus souvent dans un cadre simple, de façon informelle, en milieu communautaire. Mais la rencontre en question devait se dérouler dans la salle de conférences et le salon du CRDI (Ottawa, Canada), pièces conçues de toute évidence à des fins officielles. Or, quelques-uns des meilleurs cours d'éducation populaire ou d'éducation des adultes se déroulent dans des milieux où les ressources sont rares et où les membres du groupe doivent compter les uns sur les autres. Les milieux à la fine pointe de la technologie contribuent souvent à intimider les participants, plutôt que de les rassurer, et à promouvoir les intérêts de l'élite.

Les 38 participants à l'atelier de recherche sur la sexualité étaient tous des professionnels compétents et intelligents. Mais même l'observateur le plus désintéressé était à même de constater que le salon et la salle de conférences du CRDI, où l'atelier devait avoir lieu, pouvaient être intimidants. Dans la salle de conférences se trouvaient une longue table, où étaient posés des microphones, et à côté, des cabines d'interprète. Dans le salon, il y avait des fauteuils bien rembourrés et les murs étaient couverts de tapisseries et de portraits de

personnages importants. L'endroit semblait destiné à accueillir premiers ministres et archevêques. Il ne semblait pas indiqué pour accrocher aux murs toutes sortes de grandes feuilles et de matériel que l'on utilise normalement dans le cadre d'activités d'éducation populaire. Il semblait difficile d'y prononcer le mot « sexe » avec conviction. Même s'il n'y avait pas de préfet des études à l'horizon, on avait l'impression qu'il pouvait passer la porte en tout moment.

Heureusement, le CRDI peut compter sur les services d'un personnel de soutien exceptionnel, et il a été possible de transformer le salon en un lieu qui se prête davantage à l'éducation populaire. Les portraits des illustres personnages ont gentiment été décrochés et, sans faire de bruit (qui ne dit mot consent), ont pris le chemin de l'entrepôt. Les tapisseries ont été rangées, et les meubles, déplacés, pour créer un espace plus dégagé. D'un geste délicieusement symbolique, la table des conférences a pris l'allure d'une table à manger. Plus tard, les participants allaient y grignoter des cornichons et avaler des raisins. Des tests ont révélé que le ruban gommé n'endommagerait pas les tentures en soie. Tout était prêt, mais tout allait-il se dérouler en douceur?

L'arrivée

Quand nous nous sommes finalement réunis à Ottawa le 31 mai, tous les participants avaient été informés qu'il ne s'agissait pas d'une conférence de « présentation officielle d'articles », bien que les textes qui avaient été préparés seraient publiés plus tard, dans le compte rendu de la rencontre. En soirée, la plupart des participants se trouvaient dans le salon, au sixième étage de l'édifice du CRDI. Après les civilités d'usage qui ont marqué l'ouverture, on a demandé aux participants de s'asseoir en cercle et de se présenter à leur voisin. Pour se présenter, chaque participant devait révéler deux faits de notoriété publique (c'est-à-dire connus) et deux faits plus intimes à son sujet. C'était une façon intéressante et décontractée de lancer l'atelier. Chaque personne a ensuite présenté son partenaire à l'ensemble du groupe, et il était clair que le CRDI avait réuni dans la salle des gens doués d'intelligence, d'expérience, d'humour et de perspicacité. Une heure s'était à peine écoulée que les inquiétudes face à l'éventualité d'une inégalité des rapports de force s'étaient dissipées, telle une nappe de brouillard matinale. Les femmes s'affirmaient et se montraient directes dans leurs propos, ce qui était de bon augure pour les jours à venir.

Le cercle a une signification différente selon les cultures, mais les personnes chargées de l'éducation des adultes privilégient cette forme géométrique car elle dénote une certaine réciprocité et un équilibre des rapports de force. L'animateur consciencieux s'assoira à différents endroits dans le cercle pour que les participants n'en viennent pas à adopter une attitude de déférence ou à croire qu'il y a une table d'honneur. À la fin des présentations, il était clair que la rencontre se déroulerait sous le signe de la participation.

Le lendemain, les participants ont été appelés à faire un dessin pour montrer leurs activités habituelles dans leur pays. Certains dessins montraient le participant dans un bureau, d'autres, en plein champ. Parfois, le personnage occupait beaucoup d'espace visuel dans le paysage et d'autres fois, une toute petite place. On a fait asseoir les participants dans des groupes structurés expressément pour être hétérogènes. Chacun des groupes se constituait d'un nombre à peu près égal d'hommes et de femmes, de représentants des pays en développement et des pays industrialisés et, lorsque c'était possible, de personnes aux points de vue épistémologiques différents.

Chacun des participants a montré son dessin aux autres et, en guise d'introduction, a expliqué la signification des éléments qu'on y trouve. Plus tard, on a accroché ces dessins au mur avec les cartes d'affaires des intéressés (environ un tiers en avaient).

L'équipe des « rouges » était constituée de représentants de l'Ouganda, du Zaïre, des États-Unis, de la République Dominicaine, de la Gambie et du Canada. Les membres des « bleus » provenaient des États-Unis, du Zimbabwe, de la Thaïlande, du Brésil et du Canada. Les « jaunes » comptaient parmi eux des résidants du Canada, du Sénégal, du Soudan et de la Colombie. Les « noirs » se composaient de délégués des Philippines, de la Tanzanie, du Brésil, du Nigeria, des États-Unis et du Canada. Les « verts » provenaient de la Tanzanie, du Mexique, des États-Unis, de la Suisse, du Kenya et du Canada, et les « blancs », de l'Inde, des États-Unis, du Canada, du

Brésil, du Nigeria et de l'Ouganda.

Après les présentations d'usage et l'explication des objectifs de l'atelier, le groupe a reçu la garantie que toutes les perspectives seraient admises, qu'il était roi et maître de l'ordre du jour et que les nuances entre les divers contextes socio-culturels serviraient en tout temps de toile de fond aux discussions ou aux conclusions de l'atelier. On s'est alors penché sur le seul point à être préalablement inscrit à l'ordre du jour, soit le premier et le plus critique des thèmes à aborder : le contexte social dans la recherche sur la sexualité.

Le contexte dans la recherche sur la sexualité

La première séance de travail en groupe consistait à établir comment le contexte socio-culturel façonne la recherche sur la sexualité. Le comportement sexuel s'inscrit toujours dans un contexte social. Ainsi, l'épidémie de sida est un phénomène tout autant social et comportemental que biologique.

L'animateur avait fait des mises en garde contre l'approche des adeptes du positivisme logique, qui consiste à minimiser les variables contextuelles et à tenter d'imposer à un contexte ce qui vaut dans un autre contexte. Selon l'animateur, cette approche est tout aussi peu fertile que celle des phénoménologues, passionnés à un tel point pour le contexte que leurs travaux sont parfois peu utiles.

Les participants ont alors reçu les directives suivantes : « À cette étape, votre tâche consiste à :

- élaborer un modèle [...] dans lequel sont énumérées (et expliquées) les [...] variables contextuelles (d'ordre politique, social, culturel et économique) qui orientent la recherche sur le comportement sexuel; et
- donner des exemples de la façon dont ces variables contextuelles interviennent ou se manifestent dans diverses régions du globe pour circonscrire la question à l'étude, recueillir des données, effectuer des analyses et apporter des conclusions. »

Les groupes ont aussi été appelés à présenter leurs constatations d'une manière intéressante et imaginative, pour éveiller l'intérêt des autres participants.

Quelques-uns ont choisi de simuler un téléjournal, alors que d'autres ont opté pour des sketches et des jeux de rôle. D'autres encore ont créé des jeux, sollicitant la participation de l'auditoire. Enfin, on a eu droit entre autres à du dessin, à la composition et à l'interprétation de chansons ou d'opérettes.

Les groupes étaient fortement encouragés à utiliser des moyens d'expression appropriés à leur message. De cette façon, contenu et moyens ne feraient qu'un; les participants parviendraient à s'instruire, malgré le joug sans pitié du décalage horaire et de la fatigue, balayé par un véritable coup d'éclat.

Ces moyens ont connu pour une bonne part un dénouement heureux et débouché sur un montage culturel et humoristique à la fois agréable et stimulant.

Le premier groupe a présenté une entrevue accordée par le comité de déontologie d'une université à un chercheur désireux de faire de la recherche dans les Philippines. Celui-ci se proposait d'entreprendre une étude dans une base navale américaine où, en plus des questions sur la fréquence des relations sexuelles et la position adoptée, serait soulevée la question du rôle des rapports sexuels « dans un programme de domination universelle ».

Ce groupe a initié les participants à la notion de niveaux contextuels : force nous a été de constater que les chercheurs dont ils brossaient le tableau faisaient face à d'énormes problèmes. Leurs méthodes semblaient vulnérables. Ces chercheurs n'étaient pas préparés à affronter le faible degré d'alphabétisation dans la région. Ils n'avaient pas réalisé à quel point les questions qu'ils voulaient explorer étaient considérées intimes et empreintes de considérations religieuses ou autres dans ce coin de l'univers.

Le groupe suivant a reproduit une émission de télévision dans laquelle on trouvait un modèle de comportement sexuel galactique. Le modèle comportait des facteurs culturels macrosociologiques. À l'échelle microsociologique, il mettait en évidence les processus culturels qui déterminent l'encodage de fantasmes sexuels. Il s'agissait d'une analyse multifactorielle qui, sous une forme à la fois explicite et divertissante, mettait en lumière des variables macro et microsociologiques qui sont aussi bien contraignantes que stimulantes pour la recherche sur la sexualité.

Le groupe suivant a présenté trois sketches montrant comment les facteurs contextuels peuvent compromettre la fiabilité et la validité des données

obtenues au cours de travaux portant sur la sexualité. Les sketches ont fait ressortir à quel point les attitudes diffèrent face à la bestialité, et ont présenté des aphorismes propres à certaines cultures, ou au contraire plus universels, au sujet de la contraception (« maman te fait dire de mettre tes caoutchoucs avant de sortir ») et les difficultés associées à la collecte de données sur des sujets tabous comme la masturbation et l'orgasme chez la femme.

Le groupe suivant a présenté un jeu de rôle hilarant, illustrant ce qui se passe lorsque des personnes interviewées saisissent mal le sens que prête l'interviewer à des expressions comme pénétration pénienne, amour oral, entrer par la porte arrière et orientation sexuelle. L'exposé a donné lieu à une discussion importante sur la phénoménologie et la signification. Un participant a donné l'exemple d'un chercheur asiatique qui avait recueilli à Hong Kong et en Thaïlande des données relatives à la virginité, pour ne se rendre compte que plus tard que ce terme ne désigne pas la même chose dans ces deux pays. Cela a donné lieu à un débat sur la capacité des chercheurs d'en arriver à une certaine validation extérieure, compte tenu du relativisme culturel, et sur la possibilité de faire des généralisations et d'appliquer à un autre contexte les résultats de travaux menés dans un milieu donné.

Le groupe suivant a approfondi ce thème en mettant en scène deux prostituées qui interviewaient trois autres personnes. Cela a provoqué une discussion importante sur la façon dont les chercheurs et les sujets interprètent la signification des variables. Il s'est ensuivi un débat sur les « sujets » et les façons dont les personnes interviewées déforment leurs propres réponses pour garder en quelque sorte une mainmise sur leur sexualité. Comme un participant d'Amérique latine l'a souligné, la sexualité, c'est le pouvoir, et le fait de connaître les secrets d'une autre personne confère un certain pouvoir. La « signification » a trait à l'encodage — sentir (dans les deux sens) et toucher, mais non dire. Les chercheurs doivent parvenir à trouver les codes qu'utilisent les sujets. Au cours de l'entrevue la plus enrichissante, le chercheur entamait la discussion en disant : « Laissez-moi vous parler de moi-même... »

Le groupe suivant a tenté de donner un aperçu d'un projet international où il faut entrer en communication avec divers pays et demander la permission de faire de la recherche sur le comportement sexuel. À Cuba, en Zambie, au Panama et ailleurs, pour toute réponse, les ministres répondaient par diverses questions, soit : « Est-ce que ce sera bon pour le tourisme? »; « Nos rapports sexuels s'en trouveront-ils améliorés? »; « Peut-on s'attendre à des échanges entre les pays? ». Cet exercice portait sur le contexte socio-politique et la façon dont il détermine ou limite les travaux de recherche sur la sexualité, alors que d'autres groupes s'étaient attachés à des problèmes de méthodologie et à la manière dont la signification culturelle peut fausser les réponses et porter atteinte à la validité des données. Ce groupe a clairement démontré l'interaction inévitable entre toute tentative d'étude sur la sexualité et les problèmes sociaux, politiques et économiques. Dans certaines régions, les valeurs religieuses et le rôle qu'elles jouent dans le processus politique freinent considérablement le travail des chercheurs. Dans d'autres encore, ceux-ci doivent être conscients de la présence de hauts fonctionnaires malhonnêtes et composer avec la situation. Dans plusieurs pays, ils font face au fondamentalisme sous toutes ses formes et à certains courants d'opinion qui associent la recherche sur la sexualité à une certaine promiscuité et à une tentative de saper les fondements mêmes de la société.

Il est ressorti du travail de ce groupe que certaines contraintes sont universelles. Bien que les formes et le degré de contraintes puissent varier, on les trouve partout et les personnes qui effectuent des recherches sur la sexualité doivent donc avancer prudemment à travers de véritables champs de mines socio-politiques.

À la fin de la présentation de chaque groupe, un rapporteur était appelé à résumer les principaux thèmes abordés au sujet du contexte dans la recherche sur la sexualité et à préciser à quel point les sujets ou les perspectives avancés par le groupe avaient trouvé écho chez lui, compte tenu du contexte culturel dans lequel il vit, et de quelle façon les propos avaient servi à faire progresser le débat. Les rapporteurs ont été choisis de façon à permettre l'expression de différentes perspectives et une représentation équitable des hommes et des femmes. Les rapports étaient habituellement favorables : on félicitait les membres des groupes de leur talent de comédien et de leur perspicacité. Fait encore plus important, le rapporteur évoquait souvent une perspective nouvelle ou différente, farcie d'anecdotes sur la recherche. Souvent, le

thème principal était l'inaptitude de certains individus à comprendre les subtilités de la signification ou la malveillance des élites au pouvoir, qui se sentent menacées par ces chercheurs qui persistent à poser des questions au sujet des rapports sexuels. À maintes reprises, la discussion portait sur la notion de pouvoir, la question des hommes et des femmes et, enfin, la façon dont les valeurs religieuses favorisent ou compromettent l'exactitude méthodologique et la validité des résultats. Les chances de succès de chrétiens « bien intentionnés », essayant d'interviewer des musulmanes en Afrique, sont aussi bonnes que celles de chercheurs associés à des autorités gouvernementales, sollicitant la collaboration de sujets d'étude en Amérique latine. Ce qui compte, c'est de reconnaître l'importance capitale du contexte en matière de recherche sur la sexualité. Ainsi, les gens qui tentent de suivre de près la progression du sida devront s'assurer de bien tenir compte du contexte social dans lequel il évolue.

Il faudra probablement concevoir des méthodologies et des cadres conceptuels à caractère multifactoriel, sensibles à l'interaction entre divers ordres de variables. Vraisemblablement, il faudra aussi élaborer des cadres conceptuels qui accordent autant d'importance à l'expérience et à la signification subjectives qu'aux soi-disant données et réalités objectives. Quoi qu'il en soit, les approches exclusivement biomédicales, étrangères au contexte social des sujets étudiés et, à toutes fins pratiques, à celui des chercheurs, ne sauraient suffire.

Cette séance d'ouverture a permis d'illustrer à quel point le contexte de la recherche influe sur la présentation de problèmes et de questions, détermine le caractère approprié de diverses méthodologies et fournit le fil conceptuel dont est cousu le tissu de l'analyse. Parfois, la présentation des derniers groupes ressemblait à celle d'un groupe précédent, mais l'animateur a résisté à la tentation de demander à un groupe de laisser tomber. Il était important que tous et chacun se fassent entendre, renforçant ainsi l'idée qu'il s'agissait d'un atelier participatif, où toutes les perspectives sont importantes. Malgré certaines répétitions, nous avons été témoins d'une excellente analyse globale de contextes différents. Certains groupes envisageaient le contexte de la recherche comme étant immuable. D'autres encore concluaient à l'existence de liens inextricables entre le contexte et les rapports de force et percevaient la recherche sur la sexualité comme un instrument de changement. La pléthore de perspectives auxquelles les gens ont été exposés dès le début de l'atelier a servi de toile de fond aux discussions sur les problèmes pratiques associés à la recherche sur la sexualité.

Avant de quitter les lieux à la fin de la journée, les participants ont reçu des fiches bleues sur lesquelles ils étaient priés de proposer des points à l'ordre du jour. La plupart des participants ont rempli trois ou quatre fiches. On a ainsi obtenu 70 points à l'ordre du jour.

Certains participants, l'animateur de l'atelier et des membres du comité sur le sida se sont réunis dans la salle de conférences pour trier ces fiches par classes ou par catégories établies d'avance, soit : la conception de projets (y compris l'échantillonnage); les mesures (y compris la fiabilité et la validité); les questions conceptuelles; les groupes cibles; la diffusion (des résultats de la recherche); la modification du comportement et les ressources. Ce sont les éléments de l'ordre du jour qui ont été retenus durant le reste de l'atelier.

Évolution de la condition féminine

Tandis que les participants se réunissaient en vue de la séance du vendredi matin, plusieurs discussions portaient sur un reportage du quotidien le *Globe and Mail* selon lequel 40% des condoms vendus au Canada sont défectueux. On avait déjà fait part de certaines inquiétudes, soit que certains fabricants vendent des condoms percés et de qualité inférieure dans les pays du Tiers Monde, offrant des produits défectueux dans les pays où ils ne risquent pas de se faire intenter de poursuites judiciaires. Plus tard, nous avons appris que la revue *Consumer Reports* avait sondé 3300 de ses lecteurs pour son numéro de mars 1989. Environ une personne sur quatre a signalé qu'au cours de l'année précédente, elle avait vécu une expérience où un condom s'était déchiré. Le magazine en a conclu qu'un condom sur 140 se déchire, mais que certaines pratiques, comme le coït anal, se prêtent particulièrement à cette éventualité. Le contrôle du comportement sexuel est inextricablement lié à l'idéologie, à la culture, aux profits et au pouvoir; à cet égard, le Canada ressemble aux autres pays.

Un peu plus tard ce jour-là, un événement important est survenu et a modifié le déroulement de l'atelier. Une sexologue a annoncé qu'un groupe

allait se pencher sur la sexualité de la femme. Certains participants avaient déjà été recrutés, précisait-elle, mais d'autres étaient libres de se joindre à eux. Ainsi s'est formé un groupe nombreux, vibrant et intellectuellement stimulant, dont l'initiative permettrait à nombre de participants d'inscrire leur point de vue à l'ordre du jour. Aux yeux des organisateurs, c'était là une tournure bénéfique pour l'ensemble de l'atelier, ce dernier étant de plus en plus orienté vers la participation. Dès lors, les pauses-café et autres pauses ont eu lieu de façon impromptu, pas besoin de les annoncer. Les rapports sur les discussions gagnaient en souplesse et en variété et dénotaient souvent un bon sens de l'humour. Des notions théoriques étaient souvent évoquées, le travail accompli plus tôt sur le contexte n'était pas relégué aux oubliettes et les rapporteurs parvenaient habituellement à approfondir l'analyse. Le bruit montait, le débat s'intensifiait et les gens écoutaient avec beaucoup d'attention. Les participants avaient « émancipé » la salle de conférences et l'atelier. Le personnel du CRDI qui déambulait dans les corridors adjacents sentait que quelque chose d'important se passait et, tout au long de la journée, on pouvait voir des têtes curieuses apparaître aux portes.

Au cours de la matinée, les groupes avaient été structurés en fonction des thèmes suivants : « la femme et la sexualité », « les mesures », « la diffusion de résultats », « la conception de projets » et « la modification du comportement ». Avant la pause du midi, le groupe qui étudiait la femme et la sexualité était parvenu à ériger un modèle identifiant les variables influant sur la façon de circonscrire les questions de recherche et sur la pertinence de diverses méthodologies. Les variables se classaient sous les rubriques « variables d'entrée », « variables de transmission » et « variables de sortie ». Les sketches et jeux de rôle de la journée précédente ont servi à illustrer la justesse du modèle. Le groupe a déclaré que, dans le domaine de la recherche sur la sexualité, les chercheurs ne prêtaient pas assez attention aux fantasmes qui constituent un langage. Existe-t-il un langage commun, un archétype que connaissent toutes les cultures? Si c'est le cas, il ne s'agit pas d'un langage verbal; ainsi, le pédagogue et le chercheur devraient être disposés à utiliser marionnettes et autres instruments qui « s'expriment » par d'autres moyens.

Des participants africains ont expliqué que la recommandation faite aux hommes d'être monogames à titre de mesure de prévention du sida a été interprétée de façon plus acceptable culturellement comme une recommandation d'éviter les incartades, soit de faire l'amour uniquement à sa ou à ses partenaires régulières. Dans ce contexte, le rôle de la femme africaine a fait l'objet de discussions, notamment sur le besoin d'inciter la femme à prendre son destin en main et sur divers aspects de la sexualité féminine, entre autres, les questions de plaisir et de reproduction.

Certaines femmes ont abordé l'histoire et la mythologie entourant les organes génitaux ainsi que la façon dont les cultures associent la protubérance du pénis à l'influence et au pouvoir, et l'absence d'un organe visible (chez la femme), à la soumission et à la faiblesse. Une discussion a révélé que les éléments principaux de cette analyse demeuraient valables, même dans les cas où une distinction a été établie entre les relations sexuelles pour le plaisir et les relations sexuelles pour la reproduction. L'idée selon laquelle seul l'homme peut prendre plaisir aux relations sexuelles alors que la femme est conditionnée à dépendre de lui est profondément enracinée dans plusieurs cultures.

Bien que l'éducation donne aujourd'hui à un plus grand nombre de femmes les instruments permettant de réduire cette dépendance, tant et aussi longtemps que le taux de mortalité infantile demeure élevé, les hommes chercheront à avoir des enfants avec de nombreuses femmes. Par ailleurs, un participant a fait remarquer que, dans certaines régions de l'Afrique, les nouveaux riches font étalage de leur rang social en ayant épouses et enfants en grand nombre (ces derniers devant être des garçons).

Au moment d'aller dîner, le directeur de la Division des sciences de la santé du CRDI se demandait si les progrès enregistrés ce jour-là auraient été possibles sans les jeux de rôle, les sketches et les autres activités de la veille. À l'occasion de rencontres éducatives comme celles-ci, les moyens ne sont-ils pas une fin en soi?

La concertation

Les présentations des groupes de travail ont eu lieu l'après-midi, et les liens entre la théorie et la pratique se précisaient davantage. Les gens devenaient de plus en plus réceptifs à la notion de tensions idéologiques, proposée par un participant de l'Afrique occidentale (bref, des perspectives

d'équilibre et de conflit). On prêtait une signification culturelle plus profonde et plus pertinente au travail accompli plus tôt sur le contexte de la recherche.

La conception de projets

La pandémie de sida mène parfois à des conclusions douteuses que l'on dissimule sous le masque de la recherche. Les autorités cherchent des solutions en toute hâte, et certains chercheurs ont volontiers laissé tomber les canons habituels de la recherche scientifique dans leur empressement de répondre à la demande. Par exemple, on a introduit des actions dans des études où il est impossible d'assurer la validité interne, et pourtant la causalité est attribuée à l'action, qui souvent est une campagne publicitaire ou d'« information ». À ce stade, deux groupes se sont attardés à divers aspects de la conception de projets de recherche. À bien des égards, leurs rapports se complétaient.

Le premier rapport a repris nombre de questions déja évoquées dans les articles de fond et a donné lieu à une discussion sur la différence entre la recherche participative et l'observation de sujets. La recherche participative repose sur l'idéologie et les a priori de l'éducation populaire et, depuis plus de dix ans, sert de précepte fondamental au travail du Conseil international d'éducation des adultes. On s'applique à éliminer les distinctions entre le « chercheur » et le « sujet ».

Le Tiers Monde abonde en projets de recherche qui étaient la propriété d'étrangers et qui ont permis à ces derniers d'obtenir un diplôme ou une gratification dans leur propre milieu culturel; de tels projets ont mené à la détérioration de la vie des « sujets » ou ne l'ont touché d'aucune façon. La recherche participative est conçue pour corriger cette situation.

Dans ce contexte, les chercheurs et les sujets sont souvent les mêmes, ils sont les grands responsables de la recherche et ils s'assurent que le projet débouche sur une amélioration perceptible de leur vie. Citons à titre d'exemples remarquables la recherche historique faite par les sans-abri de Bombay et les projets de recherche sur la santé de la reproduction qui se déroulent actuellement dans nombre de régions de l'Amérique latine, y compris les *barrios* autour de Santiago, au Chili. Les chercheurs qui préconisent la recherche participative travaillent dans une optique phénoménologique et maintiennent que la neutralité n'existe pas chez les chercheurs ou en matière de recherche. Le seul fait de se déclarer neutres, comme le font les positivistes, est symptomatique d'une orientation idéologique, bien que ceux-ci tentent de dissimuler leur idéologie. Au contraire, les adeptes de la recherche participative exposent la leur au grand jour. À leur avis, la recherche dans laquelle les chercheurs détiennent les ressources et le pouvoir est habituellement conçue pour perpétuer les iniquités existantes, tandis que la recherche participative, par définition, est à l'opposé de l'oppression et de l'injustice. Il ne faut pas confondre cette notion avec celle de l'observation de sujets, par exemple lorsqu'un anthropologue vit au sein même de la population qu'il observe.

La distinction entre la recherche participative et l'observation de sujets étant faite, l'on a été amené à considérer les variables déterminant la conception de projets de recherche. Le deuxième groupe à aborder le sujet a souligné qu'en raison du caractère très intime des pratiques sexuelles, il vaut mieux recueillir les données préliminaires au moyen d'une technique moins envahissante qu'une enquête de grande envergure. De plus, en « triangulant » les données et en recourant à des collaborateurs locaux chargés de circonscrire les questions pour qu'elles soient significatives au plan culturel, il est possible de surmonter quelques-uns des obstacles liés à la collecte de données fiables et valides.

Lorsqu'un participant a demandé dans quelle mesure il était nécessaire d'utiliser des échantillons représentatifs de populations « cibles » (c'est-à-dire à risque), cela a donné lieu à une vive discussion sur les mérites des projets de recherche à caractère individualiste (habituellement de nature psychologique), par comparaison à ceux d'études plus collectives (enchâssées dans des cadres anthropologiques). En éducation des adultes et dans d'autres domaines, on formule une critique mordante à l'égard de l'idéologie de l'individualisme qui est au coeur de la recherche en Amérique du Nord, où le capitalisme accorde la priorité à l'individu et à ses « droits ». Les critiques prétendent que les chercheurs dont le travail participe de l'idéologie de l'individualisme sont si passionnés de mesures et cherchent tellement à intégrer les gens dans leur définition (habituellement élitiste) de la bonne société qu'ils occultent les variables macrosociologiques (plus sociologiques), à la base de l'infrastructure du pouvoir et des

privilèges.

Toute la portée de cette opinion a marqué les discussions jusqu'à la fin de l'atelier. À quelques exceptions près, les articles de fond s'inséraient dans une perspective individualiste. Mais les préoccupations des Occidentaux face aux mesures, à la fiabilité, à la validité et à tous les autres éléments qui plaisent aux examinateurs universitaires et aux organismes de subventions à la recherche ne sont pas forcément prioritaires chez les participants du Tiers Monde. La pandémie de sida (comme la sexualité) est étroitement liée à des structures culturelles et de pouvoir socio-politiques, les soi-disant traditions — telles que le « droit » de l'Africain d'avoir des relations sexuelles avec de nombreuses femmes ou l'excision du clitoris en Afrique — n'étant que des instruments de pouvoir, de privilège et de répression.

Les mesures

Le groupe qui étudiait les mesures a produit un ordre du jour pour la recherche dont le premier point consistait à élaborer une mesure du risque d'infection au VIH, applicable d'une culture à l'autre. Le groupe estimait par ailleurs qu'il était nécessaire d'établir la validité d'instruments destinés à être utilisés dans des pays où les ressources sont limitées. Étant donné que le budget total affecté à la santé dans certains pays n'équivaut même pas aux sommes allouées quotidiennement à ce poste dans d'autres pays, c'est là un défi de taille. Dans les pays où il n'existe aucune donnée concernant la sexualité, où doit-on commencer? Et comment? Comme point de départ, on pourrait élaborer des mesures du plaisir sexuel et de l'état de santé qui sont appropriées au plan culturel.

La sexualité de la femme

Le groupe chargé de la question de la sexualité de la femme tenait mordicus à une approche intégrée, soulignant que la fonction de reproduction de la femme a trop longtemps été considérée dans plusieurs régions du globe comme étant contraire à la notion de plaisir sexuel. Pour ce groupe, la recherche est action et, parfois, se confond avec la politique.

Un participant a souligné que la plupart des idées inscrites sur les fiches remplies par le groupe mettaient l'accent sur le plaisir sexuel et que cela était sans doute attribuable au rang socio-économique élevé des participants à l'atelier.

À la suite du rapport, la discussion a porté sur les façons d'encoder les messages visant la modification du comportement dans la lutte contre le sida. Certains aphorismes — notamment « faire l'amour avec un condom équivaut à prendre sa douche avec un imperméable » — semblent universels. Par contre, d'autres mythes et croyances, notamment les valeurs véhiculées par une société au sujet du pénis, ne sont pas nécessairement universels, mais peuvent influer considérablement sur la prévention du sida. Dans certaines cultures, l'absence de pénis chez la femme est vue comme étant la preuve qu'elle n'a pas droit au plaisir sexuel; dans d'autres, comme le condom est conçu pour couvrir le pénis, on estime qu'il diminue l'homme et son organe. Quelques personnes de ce groupe déclarent que le fait de « dire » cela aux hommes est moins efficace que « la persuasion et la séduction » et qu'il est possible de plaire aux hommes « sans les diminuer ». Elles précisent qu'en Amérique latine, *machismo* veut dire que « l'homme doit faire montre de ses talents », et cela décourage l'échange d'information entre femmes de peur de se faire ravir leur partenaire par une autre femme. Quelqu'un a également affirmé que la femme deviendra comme l'homme si elle s'émancipe trop. À cet égard, on a fait remarquer que chaque modification du comportement entraîne un changement socio-écologique en matière de sexualité, de sorte qu'il est essentiel que l'homme et la femme soient partenaires dans les négociations touchant la sexualité.

Diffusion des résultats de la recherche

Dans le cadre du rapport sur la diffusion des résultats de la recherche, un participant a déclaré qu'un pourcentage élevé d'articles sur le sida portant sur des recherches effectuées en Afrique était publié à l'extérieur du continent. D'autres ont souligné que l'orthodoxie universitaire poussait les chercheurs à faire « un type » de recherche (habituellement fondé sur le positivisme) ainsi qu'à publier des articles scientifiques à tout prix et, par le fait même, à « engraisser » leur curriculum vitae de sorte que les travaux les plus pertinents ne touchent jamais les gens qui en ont le plus besoin.

Certains participants ont fait remarquer que les chercheurs d'Amérique latine et d'Afrique sont,

dans une certaine mesure, intellectuellement colonisés. Par exemple, l'intérêt plus grand pour la recherche pure (plutôt qu'appliquée) peut aider à promouvoir la carrière du chercheur, mais il ne confère aucun pouvoir aux « sujets » de la recherche et ne remet pas en question les structures qui perpétuent l'oppression. De plus, dans certaines sociétés, la tradition orale joue un rôle plus grand que les écrits scientifiques.

Le groupe ayant étudié la diffusion des résultats de la recherche a essayé de tenir compte de ce genre de préoccupations en présentant un modèle, qui classait les types de recherche et le calendrier des initiatives de diffusion des résultats. En abscisse, on trouvait trois genres de recherches : épreuves sanguines, études démographiques générales et études du comportement. En ordonnée, on distinguait les objectifs de chaque type de recherche, les cibles de la diffusion des résultats (les destinataires), les moyens de diffusion et, enfin, les voies qu'emprunterait cette diffusion.

À la suite de ces discussions et d'autres débats survenus à la conférence montréalaise sur le sida, un « réseau sur la sexualité » a été établi, permettant ainsi aux participants à l'atelier et à d'autres spécialistes de demeurer en communication, en plus de faciliter l'échange et la diffusion d'informations. Le réseau aurait à faire l'inventaire des bases de données concernant la recherche sur la sexualité, à cerner les besoins en matière de santé sexuelle des personnes de diverses régions et à élaborer un projet de recherche type. Plus important encore, les membres ont décidé d'amorcer l'élaboration d'une série de rapports nationaux au sujet de la recherche sur la sexualité humaine, à partir de la documentation existante, d'analyses secondaires et d'articles inédits.

La modification du comportement

De prime abord, pour parvenir à une bonne santé sexuelle et la préserver, la meilleure stratégie consiste à modifier les comportements à risque. Mais la modification du comportement s'insère dans un vaste contexte socio-culturel. Depuis des années, les autorités sanitaires et autres tentent de faire en sorte que les gens abandonnent les comportements qui les exposent à des risques. Au Canada, par exemple, ils incitent les gens à porter une ceinture de sécurité, à réduire leur consommation de matières grasses, à éviter l'usage du tabac et l'abus d'alcool ou à adopter un programme d'exercices réguliers, mais ces campagnes ont connu plus ou moins de succès. Tout au long des années 50, les programmes de « communication » conçus pour réduire le taux de natalité se sont révélés de cuisants échecs. Néanmoins, certains pays — comme l'État de Singapour — utilisent largement les campagnes « d'éducation publique » pour avancer diverses idées : productivité, courtoisie, utilisation du mandarin comme langue de travail, élimination du tabagisme et des comportements socialement inacceptables, propreté des lieux publics. À cet égard, il est important de faire la distinction entre la communication, l'information et l'éducation. Les campagnes d'information ressemblent un peu à la loterie. On y gagne rarement. L'éducation se caractérise habituellement par une certaine réciprocité et ceux qui font appel à l'éducation devraient s'intéresser davantage aux questions liées au pouvoir et à la répression, ce qui n'est pas toujours le cas dans les modèles conventionnels de communication.

Lorsqu'un groupe ou une personne décide de changer le comportement d'un autre groupe ou personne, un rapport de forces s'établit entre eux. Dans certaines régions du monde, les autorités imposent tout simplement leur volonté à la population, ainsi que des pénalités — dans certains cas la mort — à ceux qui n'observent pas les règles. Résultat, on constate un degré élevé de résistance aux messages et à l'information provenant de sources gouvernementales. Et dans les régions où il y a prolifération de « campagnes », un certain cynisme (« bon, les voilà encore... ») ne tarde pas à s'installer.

Les messages concernant la santé sexuelle ou la modification du comportement doivent être transposés en « codes » faciles à déchiffrer dans le contexte socio-culturel visé. Aussi, les participants ont discuté de plusieurs campagnes publiques de sensibilisation au sida qui se sont révélées particulièrement imaginatives et bien adaptées au plan culturel. Chaque pays a connu des succès et des échecs en la matière, mais parmi les initiatives notables, on a cité l'approche « intégrée » utilisée dans la lutte contre le sida au Royaume-Uni, le film hollandais dans lequel l'attirance sexuelle pousse deux jeunes vers une étreinte avant le coït (tandis que défilent leurs « antécédents sexuels ») et, en Nouvelle-Zélande, l'annonce de condoms qui montre un parachutiste déclarant : « ...feriez-vous le saut

sans parachute? ». On a raison de croire que les messages alarmistes éveillent l'intérêt des gens au départ, mais qu'ils ne suffisent pas à consolider les nouveaux comportements.

Dans certains pays, la recherche sur la sexualité fait face à des problèmes de cueillette de données de base. De plus, les problèmes d'éthique ressortent avec d'autant plus d'acuité lorsque des traitements sont instaurés, puis abandonnés dans le cadre d'une série temporelle.

Le politique et le condom

Quand les participants se sont réunis le samedi matin, beaucoup de travail avait été abattu durant les trois jours précédents. En dépit de l'effet dévastateur de la fatigue et du décalage horaire, personne n'était allé faire la sieste dans un coin, et même les participants les plus au courant avaient appris de nouvelles choses et s'étaient étonnés des différences culturelles en matière de sexualité. Mais le plus important a été l'harmonisation de la théorie et de la pratique. Après des discussions sur les obstacles d'ordre pragmatique face à la recherche sur la sexualité, un débat était amorcé quelques secondes plus tard sur des questions théoriques complexes et, sous certains rapports, insolubles. La majorité des discussions présentaient une dimension critique et nombre de participants déclaraient que la planification et l'exécution d'un projet de recherche sur la sexualité menaçaient presque toujours le statu quo. Les aspects politiques de la recherche ont fait l'objet de longues discussions, de même que l'idée selon laquelle la recherche, l'éducation ou le changement ne sont pas neutres, mais sont plutôt fortement imprégnés de présupposés et d'idéologies.

Durant les trois jours précédents, les participants avaient plus ou moins axé leurs propos sur la santé sexuelle, telle que conçue par le CRDI. Dès le samedi matin, nous sentions qu'il fallait circonscrire davantage le débat et mettre à profit les ressources des personnes réunies à Ottawa pour faire progresser notre compréhension d'une question bien précise. La pandémie de sida a servi de toile de fond à la discussion que nous avions eue plus tôt, mais en ce samedi, les participants désiraient la mettre au coeur des discussions. La question du sida et des condoms venait d'être soulevée.

La plupart des participants voulaient amorcer une discussion sur le politique et le condom et on a donc formé deux groupes. Deux autres groupes allaient également s'attacher à l'« édification de ressources » et à « l'ordre du jour de la recherche ». La notion de praxis (réflexion dans un premier temps, action dans un deuxième) et l'idéologie que véhiculent la recherche participative et l'éducation populaire avaient marqué les discussions jusqu'à présent et elles orienteraient en quelque sorte l'étude du politique et du condom. Dans certaines régions d'Amérique latine, les projets de recherche sur l'usage du condom sont qualifiés d'initiatives axées sur la « prévention du sida » (ce qui met les gens sur une « fausse piste »). De plus, dans le cadre de programmes de santé publique, le pénis est baptisé « petit moineau ». Les « petits moineaux » socialement responsables doivent porter un chapeau — un condom. Ainsi, le premier groupe étudiant le « condom », réuni dans la salle de conférences, a été baptisé « praxis et fausse piste ». Le second, les « petits moineaux », s'est réuni dans le salon.

Praxis

Le premier groupe a énuméré les facteurs liés à l'usage du condom, créé un pays imaginaire (la « Fictiocie ») et tenté de mettre au point une stratégie de promotion et de commercialisation du condom. Dans un certain sens, les membres se sont heurtés à des énigmes socio-politiques et théoriques bien connues. Le langage a posé des difficultés. Les termes commercialisation et promotion s'inscrivent dans le paradigme des communications hiérarchisées. Quels sont ses mérites par comparaison au paradigme éducation, qui part de la base et repose dans les mains de la collectivité?

La décision d'« adopter » le condom, estimait-on, était issue de l'interaction complexe de nombreuses variables contextuelles, socio-politiques, culturelles et individuelles. Par exemple : Que « savent » les gens au sujet du condom? Quels sont les fantasmes sexuels dominants? Quels rapports y a-t-il entre ceux-ci et le condom? Les gens ont-ils appris à faire entrer le condom (lorsqu'il s'agit de l'enfiler, par exemple) dans leur jeux sexuels? Quel rôle l'Église joue-t-elle? Minera-t-elle ou interdira-t-elle les stratégies de promotion du condom? Le gouvernement croit-il que le secteur du tourisme sera menacé si les gens se mettent à discuter ouvertement de condoms? Quelle place ont les idées et les comportements fondamentalistes dans ce pays,

et les dirigeants politiques croient-ils que la promotion du condom mènera à une plus grande promiscuité?

Les participants croyaient que la « signification première » de la sexualité détermine largement l'usage du condom à l'intérieur d'une société. Dans nombre de régions, on a pour principe que la femme doit s'adonner à des relations sexuelles uniquement à des fins de reproduction, et non pour y prendre plaisir. L'excision du clitoris, qui se pratique dans certaines régions de l'Afrique, est perçue par certains comme étant une manifestation radicale d'un tel principe et, par d'autres, comme faisant partie du « système immunitaire » traditionnel. Les participants estimaient que les campagnes locales de promotion du condom seraient plus efficaces que des campagnes nationales.

On a ensuite abordé les facteurs socio-économiques liés à l'usage du condom. Selon certains participants, on a raison de croire que le Tiers Monde hérite des condoms défectueux de fabricants étrangers. Il existe au moins un grand pays où il n'est pas permis d'importer des condoms, mais l'industrie locale attache peu d'importance au contrôle de la qualité.

Par ailleurs, les stigmates et le stress associés à l'achat de condoms doivent être éliminés, a souligné le groupe, qui a aussi précisé que l'usage du condom doit s'inscrire dans un contexte écologique.

Dans plusieurs pays, le premier geste à poser pour la prévention du sida et la promotion du condom consiste à asphalter les routes. Lorsque les condoms ne sont pas distribués efficacement, ils sèchent sur les tablettes des entrepôts et perdent leur propriété lubrifiante.

Dans d'autres pays, la corruption constitue la variable la plus importante pour la promotion du condom. « Rien ne bouge à moins que les hauts fonctionnaires n'en retirent quelque profit », de déclarer un participant.

Les participants se sont ensuite penchés sur les problèmes associés à l'utilisation du condom par les masses. Un participant a demandé : « Qu'adviendrait-il si des millions de gens les utilisaient? Que ferions-nous de milliards de condoms usagés remplis de sperme infecté? »

Au Japon, où l'utilisation du condom est chose courante, les architectes et les plombiers doivent voir au problème de canalisations bloquées par des centaines de condoms. Les utilisateurs de fosses septiques causent d'immenses problèmes lorsqu'ils jettent leurs condoms dans les cuvettes. En campagne, on incite les villageois à enterrer les condoms sous la chaux à l'arrière des maisons.

Certaines images utilisées pour commercialiser le condom en Fictiocie étaient très amusantes, mais la présentation a fini sur une note sérieuse. Les participants se sont entendus sur le fait que la culture sexuelle est entièrement à refaire. « Nos enfants ne jouiront pas de la même liberté que nous », de dire un participant. Par ailleurs, le condom est à changer le sens que l'on prête au mot confiance, et les couples qui ne sont pas honnêtes au sujet de leurs antécédents sexuels peuvent entraîner des conséquences très fâcheuses.

En outre, les propos laissaient deviner que le condom crée un sentiment de sécurité illusoire et que les relations sexuelles qui présentent un risque élevé constituent le moyen ultime pour les pauvres et les marginaux d'exprimer leur indépendance. Chez les groupes de jeunes à tendance nihiliste, les relations sexuelles présentant un risque élevé ne diffèrent aucunement de la conduite d'une voiture en état d'ébriété, de la consommation de drogues potentiellement mortelles ou d'autres comportements perçus largement comme étant antisociaux par les gens qui ont investi dans le statu quo. De plus, bon nombre de jeunes se considèrent comme immortels, donc protégés contre les maladies transmises sexuellement. Le sida devient de plus en plus le problème du pauvre et du marginal, qui en est venu à remettre en question la véracité de tout message émanant d'un gouvernement ou d'autres « autorités ».

Le deuxième groupe à s'être penché sur l'usage du condom a repris à peu près les mêmes thèmes, mais, en plus, a mis en lumière les difficultés qui minent les campagnes de promotion. Comment les adeptes du condom peuvent-ils enrayer la croyance populaire selon laquelle le condom réduit le plaisir sexuel, surtout lorsqu'il y a tant de condoms mal lubrifiés qui provoquent une douleur chez la femme? Il existe un problème encore plus grand : dans plusieurs cultures, l'homme considère le condom comme une insulte à sa virilité ou un obstacle à une relation psychologique complète. Ainsi, dans certaines régions, l'homme répond aux exhortations à porter le condom, mais il en coupe le bout de façon à rendre la relation « complète ».

Le deuxième groupe a relevé divers problèmes qui pourraient faire l'objet de recherches sur le

politique et le condom. Quelles stratégies utiliser pour que les femmes aient voix au chapitre en ce qui concerne l'utilisation du condom? Que retirerait-on d'une étude comparative portant sur des pays (par exemple le Japon) où la promotion du condom s'est révélée un succès? Comment peut-on améliorer la fabrication, la distribution et l'utilisation du condom? Quels sont les paramètres idéologiques du problème et comment peut-on assurer une participation à partir de la base? Qui devrait distribuer les condoms, le gouvernement, les organisations non gouvernementales, ou faut-il adopter une approche multisectorielle? Quand convient-il de cesser d'utiliser le condom et dans quelle mesure devrait-il y avoir une promotion spéciale auprès des parents et des jeunes? Enfin, sommes-nous — les participants à l'atelier — des modèles de comportement?

Boucler la boucle

La plupart des participants du Tiers Monde allaient prendre l'« autobus du sex business » en partance pour la Cinquième conférence internationale sur le sida, débutant à Montréal dans quelques jours. D'autres allaient reprendre le travail. À Montréal, on allait assister à des échanges sans précédent et, selon certaines rumeurs, des militants de la cause du sida tenteraient de se servir de la conférence pour attirer l'attention sur leur sort. Mais il s'agissait encore de choses à venir. Il fallait auparavant boucler la boucle, mettre un terme aux activités amorcées quatre jours plus tôt et préparer les gens à envisager les étapes à venir. Restait donc à réflechir sur les quatre derniers jours et à clore la rencontre.

Cinq participants de différentes régions du monde ont été appelés à réfléchir aux activités des quatre derniers jours et à faire part de leurs impressions à tout le groupe. L'un d'eux a déclaré qu'avant de venir à l'atelier, il s'attendait à ce que certaines personnes « dominent ». « En général, a-t-il précisé, nous n'avons pas l'occasion de parler à ces rencontres ». Cela n'avait pas été le cas à Ottawa. Tout le monde avait mis la main à la pâte. Tout se déroulait sous le signe de la participation. Il a affirmé que le CRDI connaissait son métier et qu'il « devrait organiser un atelier sur la façon de tenir un atelier ». Un autre participant a affirmé qu'il avait apporté son baladeur Sony au cas où la réunion deviendrait ennuyeuse, mais il n'a pas eu à l'utiliser. Il espérait que les « artefacts » de l'atelier seraient préservés. Il désignait les murs où, quelques jours auparavant, étaient accrochés les portraits de personnages illustres. À présent, les murs étaient couverts des mots, des dessins et des autres produits de l'atelier. Nous avions créé un centre d'échanges sur la recherche et en dépit de nos origines diverses, nous étions maintenant un groupe remarquablement harmonieux et centré sur la tâche. La troisième personne à se prononcer a fait écho à ces commentaires et a remercié tout le monde, précisant que le réseau de contacts qui avait été créé lui serait d'une grande utilité. Une autre personne a félicité le Canada et le CRDI d'avoir encouragé les gens à participer à cet atelier et à la conférence internationale qui allait suivre. Enfin, Richard Wilson, directeur de la Division des sciences de la santé du CRDI, a remercié les personnes présentes pour leur participation et a promis de préserver les artefacts.

L'atelier tirait à sa fin. On a déplacé les meubles et les participants ont formé un cercle, comme celui qui avait été formé quatre jours plus tôt, mais les gens étaient plus à l'aise, ensemble.

« Lorsque nous nous sommes rencontrés ici il y a quatre jours, nous étions des étrangers, de dire l'animateur de l'atelier. L'amitié et la solidarité sont les corollaires de l'éducation... Dans toute notre diversité, nous sommes maintenant amis...

« Regardez les gens autour de vous. Ce sont vos amis. Regardez-les dans les yeux. Vous ne les verrez pas pour un certain temps. Regardez-les... »

Quelques minutes plus tard :

« Maintenant, reculez de trois pas... faites une pause ... regardez autour de vous encore une fois...

« Revenez vers le milieu... »

Les participants avancent, se resserrent les uns contre les autres.

« Reculez maintenant... »

Les participants forment à présent un grand cercle; certains sont très près des murs, éloignés les uns des autres.

« Maintenant, tournez-vous et faites face au mur...

« Cette expérience a été agréable, mais vous devez vous dégager des liens créés ici. Il y a du pain sur la planche. À la maison. Au travail. Pour certains d'entre vous, à Montréal. Prenez quelques minutes à présent. En silence. Pensez à ce que vous allez faire maintenant, aux prochains pas... »

Les participants gardent le silence. Le seul bruit que l'on entend provient de quelques voitures 14 étages plus bas. Une minute s'écoule. Silence. Une minute et demie. Silence toujours. Deux minutes...

« Merci beaucoup. »

C'était la fin de l'atelier.

Report on Research on Sexual Behaviour Workshop: 31 May to 3 June 1989, Ottawa

Edward S. Herold, PhD, *who is a professor, Department of Family Studies, University of Guelph, Department of Family Studies, Guelph, Ontario N1G 2W1, Canada, summarized the background papers and put them within the context of the workshop.*

Introduction

Given the seriousness of the AIDS (acquired immunodeficiency syndrome) epidemic in many developing countries and the lack of a cure for the disease, the International Development Research Centre (IDRC) has adopted the policy of encouraging research on sexual behaviour and behavioural change to prevent the spread of HIV (human immunodeficiency virus). Such research should benefit countries that have a large number of AIDS cases as well as those having few cases and wanting to keep the numbers low. Research on sexual behaviour would also be useful in other areas of sexual health.

An AIDS committee, comprising officers from IDRC's divisions of Health Sciences, Social Sciences, Information Sciences, and Communications, advises the Centre on needs and opportunities for AIDS-related research and monitors the Centre's initiatives in these areas.

When the committee sponsored a workshop that preceded the fifth international conference on AIDS, it sought participants from a variety of disciplines and regions with experience researching sexual behaviour.

The workshop aimed to:

- Determine how sexuality research differs from other social research;
- Prepare a synthesis of research regarding AIDS and sexual behaviour;
- Discuss the major research and methodological issues in studying sexual behaviour; and
- Recommend strategies for changing sexual behaviour.

Additionally, the committee assumed that IDRC would gain insights from the workshop and be better able to evaluate research proposals dealing with AIDS and sexual behaviour.

To familiarize participants with the major methodological issues in sexual behaviour research, the committee circulated the background papers that make up the rest of this publication.

The 35 participants involved in the workshop (including six members of the IDRC AIDS Committee) were from Africa, Asia, Latin America, North America, and Europe.

The workshop was purposely structured to facilitate participation. The number of participants was limited, and there was no formal presentation of papers. Most of the time was spent in small group discussion.

The participants were given a general outline of suggested topics to begin the workshop, and these were modified to suit their interests. The first day, all discussed societal and cultural factors involved in sexual behaviour research. During the remaining two days participants chose among sessions on social factors affecting sexual research; cross-cultural issues; research design; measurement; female sexuality; dissemination of research results; behavioural change; the marketing of condoms; and the establishment of networks.

Social Factors Affecting Sexual Research

Historically, sex has been a taboo topic -- one that is not discussed in public -- and, despite an increased openness generally, some societies have maintained attitudes and beliefs that are barriers to sexual research. As well, some political leaders are concerned that research will result in findings embarrassing to the country, or they worry that reports of AIDS cases in their country will hurt tourism. In some societies, the idea of asking women questions about sex meets with resistance. A concern has been expressed that, by asking questions, the researchers will "plant ideas" leading to an increase in sexual interest and deviant behaviours.

Economic factors can also deter sexual research. In poor countries, such research may be given low priority because of limited resources, and it might occasion more receptivity if it were funded by donors.

Another obstacle is the lack of trained personnel to conduct sexual research. Even developed countries have relatively few specialists in sexual behaviour research. Given the taboos surrounding sexuality, the taboos about doing research on sexuality are not too surprising, and they have inhibited some academics who feared negative effects on their career advancement. The paper by Allgeier in this book points out that some university professors hesitate to admit that they carry out studies on sexuality.

Most of the research on sexual behaviour has been done in developed countries, particularly the United States. Thus, most of the generalizations about sexual behaviour have been based on only a few cultures. However, even in the countries where most of the sexual behaviour research has been conducted, repressive attitudes, as discussed by Allgeier, have hindered the collection of data, especially on topics such as childhood sexuality. Also, because of a lack of funding, large surveys of sexual behaviour have been few, although the AIDS threat has rendered sexual research much easier to conduct than previously. This is true for both developed and developing countries. For example, in Canada, in 1988 a large national study of the sexual behaviour of students in schools was conducted as part of a youth and AIDS survey. Yet only a few years earlier, the researchers were constrained from asking any sexual questions of a similar sample of students. Adeokun, in his paper in this book, comments that because of AIDS in African countries very few people refuse to cooperate.

Also, because of AIDS, the researchers can obtain international funding. The Social and Behavioural Research Unit of the World Health Organization's (WHO)/Global Programme on AIDS (GPA) is playing a key role in initiating cross-cultural sexual behaviour research in different countries. As discussed by Adeokun, WHO has developed a standard questionnaire for obtaining information about sexual relations, and it is being used in several different countries. Other international agencies such as AIDSCOM are also involved in sexuality research.

Although AIDS is the main entry point for much of sexuality research today, the trend is toward focusing on the broader issue of sexual health. Sexual health encompasses not only AIDS and other STDs but many other aspects of sexuality. What exactly it encompasses depends on culture because sexual concepts have different meanings in different cultures.

Cross-Cultural Issues

As discussed in the paper by Sittitrai and Barry, the concept of virginity can have different interpretations depending upon the context. Genital intercourse - given that social intercourse means talking - might be interpreted to mean oral sex. In some societies, men pay their mistresses and would not consider the woman's livelihood prostitution. Also, as discussed by Allgeier, in some societies such as Brazil, a man may engage in penetrative anal intercourse with another male and would not consider it homosexual behaviour as long as he

plays the active role in the sexual act. These different conceptualizations make cross-cultural comparisons difficult but not impossible if researchers pay attention to different cultural definitions.

Ideally, researchers use the same questions in cross-cultural research, but cultural differences can so distort the meaning of particular questions that cross-cultural comparisons would be meaningless. Translation of questions into another language can also result in distortions of meaning. One means for overcoming this problem is to translate questions into the second language and then have someone else translate the questions back to the first language.

Researchers need to be aware that cultural change can sometimes occur rapidly. This is particularly true with the AIDS epidemic so that countries, initially opposed to sexuality research, are, in a relatively short time, coming to accept this research.

Different research methods may be required for different cultural contexts. For example, in societies with a low literacy level it would be impossible to use written questionnaires. As discussed by Catania in this report, people who are not used to conceptualizing mathematically may have difficulty with response scales like the Likert type that require evaluation of the degree of some attribute. Clearly, the research design demands particularly careful thought for studies in differing cultures.

Research Design

To select the design, we as researchers first need to define our objectives. We need to decide what we want to know and from whom we want to know it. Also, we need to decide what use the findings can serve. Zeller, in his paper on qualitative methods in this report, has succinctly described the three main research objectives:

- Causal inference;
- Confirmation and generalization; and
- Exploration.

Respectively, they are built on classical experiment, quantitative methods (sample survey), and qualitative methods. Zeller discusses the main strengths and limitations of each of the methodological approaches.

For example, one objective may be to determine the risk-taking behaviour of the adult population. The researchers could obtain a random sample of the population and ask questions regarding AIDS risk factors such as number of partners, types of sexual behaviours, and use of condoms. If there are indications that some groups in a society have a higher prevalence of HIV infection, then researchers might focus on those specific groups. For example, in pattern I countries, many studies have focused on the sexual behaviour of homosexual males. In pattern II countries, female prostitutes have frequently been targeted for research on sexual behaviour. Adolescents are the focus of study in many countries.

In exploratory research, where not much is known about a particular topic, qualitative methods assist the researcher in discovering the key issues as defined by the subjects. The two main qualitative methods are in-depth interviews and focus groups. Whereas the interview seeks in-depth information from specific individuals one at a time, the focus group is a discussion group that allows the participants to interact with one another about shared interests. In his paper, Zeller presents the key aspects of interviews and focus groups, with an emphasis on the latter. Zeller comments that, while focus groups are cost effective, they have disadvantages such as not being representative. However, one strategy to deal with this limitation is to use a number of focus groups from all of the possible target populations.

An important factor in selecting a research strategy is the limited amount of financial resources available for research. Cost-effectiveness definitely needs to be taken into account in decisions about the mixture of qualitative and quantitative approaches.

Rather than discussing qualitative and quantitative methodologies as distinct entities, the workshop participants viewed them as interdependent and complementary. For example, interviews and focus group discussions could be used in the development of a survey questionnaire that would be administered to a large sample. In addition to the survey, individual interviews or focus groups could be used to provide insight into the survey findings, resulting in an integration of results.

In most research, the investigators need to be aware of community power structures and the sources of support essential for research to proceed.

Considerable effort also needs to be given to establishing rapport with subjects. Ideally, research subjects are involved in the development of the research proposal.

Interviewers must be selected carefully. If interviewers are from outside a community, they may have difficulty establishing rapport and trust. However, if interviewers are too closely involved with the subjects, the subjects may be concerned about lack of confidentiality and be less open in their responses. Pickering (1988) suggests that married women are unlikely to admit to having extramarital sex, particularly if money is involved, to another woman of the same social position. She also suggests that young single men exaggerate the number of their sexual partners to gain social prestige when being interviewed by someone from their own peer group.

Researchers should empathize with their subjects to gain a more complete understanding of their perspectives. Here an important issue is that of self-disclosure. The interviewer may establish rapport by disclosing certain aspects of his or her own history but runs a risk of inappropriate disclosure that alienates subjects.

The interviewer's characteristics can play a critical role in the success of research projects. In many societies, it would be totally inappropriate for men to interview women about their sexual history. Similarly, in some cultures, it would be unacceptable for an unmarried woman to ask personal questions about sexual behaviour. The educational level of the interviewer is also an issue in that the person needs a minimum level of education to be able to conduct and record the interview. However, someone with a level of education considerably different from that of the subjects may have difficulty establishing rapport with them.

Many ethical issues surface, particularly with respect to confidentiality and individual privacy. Researchers must ensure that all participation in a study is voluntary and that confidentiality is guaranteed.

Measurement

Too often researchers use the scatter-gun approach to measurement by constructing as many questions as possible on the topics being studied. More consideration should be given to identifying key questions. Conceptual models such as Catania's AIDS Risk Reduction Model can guide their research.

They must pay careful attention to reliability and validity in the design of studies and the construction of measurement instruments. Pickering (1988) in her study of sexual patterns in the Gambia used diverse techniques, including ethnographic participant observation, in settings such as bars, focus groups, interviews, and diaries. One of her main findings was that about one-half of the women did not divulge the number of their partners or their history of STDs. The men appeared to keep an accurate record of their sexual contacts in the diaries, but the women, in general, did not respond well to the diaries. The implication is that in societies where there is a double standard about sexual activity, women are less likely to admit to sexual activity outside established norms.

We as researchers need to be particularly concerned about the validity of questions probing changes in sexual behaviour. For example, a survey indicating the seriousness of AIDS is liable to exert some social pressure on respondents to state that they are being responsible by changing their behaviour.

Catania's paper analyzes many factors that affect the reliability and validity of sexual research. He points out that qualitative methods can provide researchers with an understanding of the sexual language and beliefs of a group. Without this understanding, they may rely on quantitative methods that produce faulty data.

Catania notes that people differ in their willingness to disclose sexual information not only to researchers but also to partners and friends. In particular, those who feel guilty about their sexual behaviour are less likely to be disclosing. Catania discusses how different methods influence response rates in sexual behaviour research. He presents a strong argument that researchers should include methodological variations of their proposed procedures and that these should be encouraged by funding agencies. Also, researchers should detail more completely their methods.

Catania suggests four strategies to obtain more reliable data during interviews:

- Communicating to respondents a nonjudgmental attitude;
- Using open response formats and sexual terms familiar to respondents;

- Including measures of self-presentation bias; and
- Conducting extensive pretesting of the interview.

Female Sexuality

Across societies, attitudes regarding female sexuality vary more than do those toward male sexuality. Generally, societies accept that men enjoy sex, whereas they differ in acceptance of female sexual pleasure. In some societies, sex for women is viewed solely in terms of reproduction and their giving pleasure to men, their status depends upon having children. In other societies sexual pleasure is considered as important for women as for men. How closely sexual behaviour is linked with attitudes toward sexual pleasure is not clear. Are men more likely to have sex with prostitutes in societies where female sexual pleasure is said not to exist? Are men less likely to be interested in having sex with their wives if they believe their wives do not enjoy sex, and are they then more likely to turn to other women such as prostitutes? Without surveys of attitudes, one can only speculate.

Female sexuality cannot be studied in isolation from male sexuality. Adeokun, for example, states that in many African countries the taboos against sexual relations during lactation and menstruation are one reason for men's extramarital sexual relations.

What happens to couple relationships when husbands stop having extramarital sex? Do the husbands become more demanding of their primary relationship? How are sexual behaviours negotiated? Allgeier maintains that women often lack the negotiation skills to avoid unwanted sexual advances. Do women have any power regarding the negotiation of safer sex practices?

How do attitudes and practices change during a life span? At present, we have no understanding of female sexuality across the life cycle nor across levels of analysis such as the individual, the couple, the family, and the community. We know little about the role of economic and religious institutions and regional and national perspectives. Adeokun as well as Sittitrai and Barry claim that poverty can explain many of the extramarital relationships of women, including the decision to become sex trade workers.

Numerous studies are now being done of female sex trade workers because in many countries they are considered to be major sources of HIV transmission. Certainly further research needs to be done with this group, particularly with regard to condom use. However, as noted by Allgeier, few studies pursue an understanding of the clients of prostitutes, and we need to make more efforts to survey this group.

Dissemination and Utilization of Research Results

In the past, researchers from industrialized countries exploited developing countries, often collecting data without consulting the local population about their needs. Sometimes the results have not even been shared with the countries involved. Where collaboration has taken place, sharing of research results is not something that is done once at the end of a research project. It is ongoing and deserves conscious effort from the moment a research project begins. The contributions of developing-country colleagues have not always been given adequate recognition, with outside researchers often demanding to be listed as first author.

Researchers should be prepared to answer questions at the end of every interview. Data gathering, for example on AIDS prevention, is bound to pique people's curiosity, and researchers must be ready to elaborate on behaviours to prevent AIDS.

Research can help identify misconceptions among people and thus be used to modify information campaigns. Behavioural research can be most useful in helping program planners understand patterns of behaviour; it can assist in decisions about which behaviours should be changed.

Research findings should be made widely available to the subjects involved in the research as well as to community and national leaders, particularly policymakers. They should be written in a format that is interesting and useful to politicians as well as to health and educational professionals. The findings should also be disseminated through the various channels of the mass media.

Often research findings of projects carried out in developing countries are not published, therefore are not available for other researchers and do not find their way into a scientific base of knowledge that could explain sexual patterns across cultures. One major reason is the lack of resources for the

analysis and publication of data. Funding agencies should provide sufficient funds for this important component of research and encourage researchers to make their findings available to the scientific community.

Behavioural Change

Baseline studies of sexual behaviour must precede behavioural change programs so that we know the behaviours that may need to be changed. Also, we need to be aware of political and social constraints on the strategies that can be implemented. Some policymakers, for example, censor the use of explicit language in the discussion of alternative sexual practices.

Research to underpin behavioural change must be based on a broad concept of sexual health, including the emotional and social as well as the physical aspects of sexuality. An assumption is that behavioural changes can be made to improve sexual health, and the behavioural options to prevent AIDS are celibacy, monogamy, reduction of numbers of partners, masturbation, use of condoms and of spermicides. Also, avoidance, or early treatment, of other STDs can help to prevent the spread of HIV. Not all of the possible changes are likely to be adopted by any one group; rather each group is likely to adopt only the changes that conform to existing practices.

The AIDSCOM paper on behavioural change reviews these options and indicates that reducing the numbers of partners will significantly reduce the incidence of many STDs but will have only a limited impact on HIV transmission. However, the use of condoms and adopting sexual activities that do not include intercourse would reduce the spread of HIV.

The AIDSCOM paper outlines the strategies necessary to bring about behavioural change:

- Define the target groups;
- Assess the current situation through market research;
- Define the content of a message;
- Define channels for message delivery; and
- Continually evaluate the education program.

Campaigns based solely on fear do not usually change behaviour. Although individuals must perceive their risk, which can be made clear through fear messages, they must also be shown constructive ways of avoiding the risk -- affirming the efficacy of self. When people become too frightened, they may be unable to act responsibly or they may adopt the attitude that they are powerless to alter a predetermined fate.

Programs promoting sexual health, including safer sex, should focus on how behavioural changes can improve relationships and sexual satisfaction for both partners. Information campaigns by themselves are not sufficient to bring about change in sexual practices but what else is needed depends on the context.

An important component of any change campaign will be the improvement in communication by the people involved. It is difficult for people to adopt safer sex practices if they lack the skills to discuss these issues. Yet, many people have difficulty in openly discussing sexual issues, and every group uses different language to describe sexual activities.

Behavioural changes that are initiated by AIDS prevention programs must be reinforced. Otherwise, as in many other areas of health promotion, people are likely to resume unsafe practices. Social support by, for example, peer groups can help individuals sustain behavioural changes.

How to measure behavioural change is a key question. Too often, evaluations measure changes in knowledge but not in behaviour. Many variables confound results and are difficult to control. At any rate, documenting changes that have occurred is not enough, one must focus on understanding how and why changes have occurred.

The Marketing of Condoms

One priority of research on sexuality should be studies of attitudes toward condom use and factors inhibiting or facilitating condom use. This includes the study of the cultural meaning of condoms to people and the social, psychological, economic, religious, and political variables that affect their use. Cross-cultural surveys, especially among those who have multiple sexual partners including prostitutes and their clients would enable more effective programs to promote condoms. Questions that need answers include:

- How does relationship with partners (long-term, casual, or one-time) affect use?

- What effects do alcohol or drug use have on condom use?
- Are condoms being used correctly (e.g., put on before penetration and used only once)?
- What do local people believe about HIV transmission?
- What do people perceive as their needs for STD control?
- How have countries such as Japan generated a high acceptance of condoms, and can the experience be used to improve marketing approaches in other countries?
- Why are some people successful users of condoms and others not?

With answers to such questions, one can campaign to make the use of condoms normative in sexual relationships.

To market condoms, long-term educational strategies have to be adopted using a variety of communication channels. This includes school-based as well as community-based education and the use of mass media. Educational materials might encourage the incorporation of condom use in people's fantasies of sex. Education about condoms should begin at early ages so that adolescents will be comfortable about using them. Health care workers and other professionals should be given workshops on how to teach about condoms. Marketing should include endorsements by popular role models such as sports and music "stars" and should include women as well as men.

People should not have to go out of their way to obtain condoms. Making condoms more accessible involves, among other things, persuading and working with policymakers, ensuring supplies (either through local production or imports), establishing effective distribution systems (either public, private or a combination). These distribution systems must take into account the deterioration of condoms in storage, particularly in hot humid, conditions. Safe disposal of used condoms to remove the risk of HIV transmission from infected semen must be encouraged. Condom-exporting countries should ensure that defective condoms are not being dumped on other countries. There needs to be quality control so that reliability can be assured. Condoms themselves need to be made user-friendly so that they come in attractive packages with easy to read instructions or diagrams. They need to be designed in such a way as to be pleasant to use, with sufficient lubrication to ensure against friction for women. They need to be affordable, perhaps subsidized by government.

Some beliefs that militate against condom use are already well known. These include the belief that condoms are unreliable (despite high rates of success in reducing HIV transmission); the belief that they reduce sexual pleasure, especially for men; the belief that purchasing condoms and putting them on in front of a partner (or asking a partner to use them) is degrading; the belief, in some societies, that sexual relations are not complete unless the man ejaculates inside the vagina. Given such beliefs, condoms are unlikely to be accepted.

Clearly, the task for researchers and health promoters is daunting, and all of us attempting it must support one another. In fact, the workshop participants expressed the desire to see a formal network of contacts established after the workshop.

The Establishment of Networks

Networking is part of WHO's GPA, and it was hoped that IDRC would provide the catalyst for establishing a network of participants at the workshop in Ottawa. One suggestion was to establish five or six regional centres that would act as bases of operations for the network. The proposal was that multidisciplinary centres be established, and be provided long-term funding to sustain collaborative efforts and be staffed by health workers and social scientists with expertise in studying sexual behaviour and in survey sampling, design and program evaluation.

One or more centres should be designated as international database resources for research on sexual behaviour. They should be given a mandate to keep in contact with researchers of sexual behaviour around the world and to obtain up-to-date information on current research activities, publications, and research instruments. Without a clearinghouse for information, researchers waste much of their time duplicating the work of others.

As a corollary, researchers without training on how to conduct research on sexual behaviour, cannot make much progress. Thus, networking must include training, both short and long term, particularly for developing-country researchers.

Conclusion

The AIDS epidemic has provided a strong impetus for research on human sexual behaviour. Basic research on this topic is needed to prevent the spread not only of AIDS but also of other STDs. Also, the information will benefit family planning programs and efforts to alleviate sexual dysfunctions. The participants at the Ottawa workshop called for increases in sexual behaviour research and supported the role of IDRC in giving this research a high priority.

Rapport de l'atelier de recherche sur le comportement sexuel du 31 mai au 3 juin 1989, à Ottawa

Edward S. Herold, Ph.D., *professeur au Département des études familiales, Université de Guelph, Guelph (Ontario) N1G 2W1, Canada, a résumé les articles de fond et les a placés dans le contexte de l'atelier.*

Introduction

Étant donné la gravité de l'épidémie de sida qui sévit dans de nombreux pays du Tiers Monde et le fait que cette maladie demeure incurable, le Centre de recherches pour le développement international (CRDI) a pour politique d'appuyer la recherche sur le comportement sexuel et la modification de comportement afin d'enrayer les progrès du VIH (virus d'immunodéficience humaine). Une telle recherche profiterait non seulement aux pays où la prévalence du sida est élevée, mais aussi à ceux où il y a peu de cas de sida et où l'on entend maintenir cette tendance. La recherche sur le comportement sexuel se révélerait également utile dans les autres domaines de la santé sexuelle.

Le CRDI a mis sur pied un comité sur le sida, formé de membres du personnel des divisions suivantes — Sciences de la santé, Sciences sociales, Sciences de l'information et Communications — afin de conseiller le CRDI sur les besoins et les possibilités en matière de recherche liée au sida et à surveiller les initiatives du CRDI dans ce domaine.

Le comité sur le sida a décidé de parrainer un atelier qui se déroulerait avant la Cinquième conférence internationale sur le sida, atelier auquel seraient conviés des participants de diverses disciplines et ayant fait de la recherche sur le comportement sexuel.

L'atelier visait à :

- déterminer de quelle façon la recherche sur la sexualité diffère d'autres recherches à caractère social;
- préparer une synthèse de la recherche sur le sida et le comportement sexuel;
- discuter des principales questions de méthodologie et de recherche associées à l'étude du comportement sexuel;
- recommander des stratégies visant à modifier le comportement sexuel.

Par ailleurs, le comité présumait que l'atelier permettrait au CRDI de faire la lumière sur certaines questions et d'être mieux en mesure d'évaluer les propositions d'études sur le sida et le comportement sexuel.

Afin de familiariser les participants aux principales questions de méthodologie liées à la recherche sur le comportement sexuel, le comité a fait parvenir à ces derniers les sept articles de fond qui composent le reste de cette publication.

Au total, 35 personnes provenant d'Afrique, d'Asie, d'Amérique latine, du Canada, des États-Unis et d'Europe (y compris six membres du comité sur le sida du CRDI) ont pris part à cette rencontre.

La structure de l'atelier visait expressément à encourager la participation. Le nombre de participants était limité et on n'a assisté à aucune présentation officielle d'articles. La plupart du temps, il y avait des discussions en petits groupes.

Au début de l'atelier, l'on a brossé à grands traits les thèmes proposés, que les participants ont modifiés au cours de la rencontre en fonction de leurs intérêts. La première journée, les participants ont discuté de facteurs sociaux et culturels associés à la recherche sur le comportement sexuel. Les deux autres jours, ils pouvaient faire leur choix parmi diverses séances, notamment : les facteurs sociaux touchant la recherche sur la sexualité; les questions interculturelles; la conception des projets de recherche; les mesures; la sexualité de la femme; la diffusion des résultats de la recherche; la modification du comportement; la commercialisation des condoms; et l'établissement de réseaux.

Facteurs sociaux touchant la recherche sur la sexualité

Par le passé, les relations sexuelles étaient un sujet tabou — que l'on doit taire en public — et, bien que notre époque soit caractérisée par une plus grande ouverture d'esprit, il existe toujours certaines sociétés dont les attitudes et les croyances sont autant de barrières à la recherche sur la sexualité. De même, certains dirigeants politiques craignent qu'une telle recherche pourrait aboutir à des résultats embarrassants pour leur pays ou que les rapports sur le nombre de cas de sida dans leur pays pourraient nuire au secteur du tourisme. Dans certaines sociétés, l'idée de poser des questions aux femmes sur les relations sexuelles rencontre une certaine résistance. Certains ont peur que les chercheurs, en posant des questions, vont donner des idées aux gens, avec pour résultat un intérêt accru pour la sexualité et les comportements déviants.

Des facteurs économiques peuvent également avoir un effet dissuasif sur la recherche concernant la sexualité. Dans les pays économiquement faibles, ce genre de recherche peut se trouver au bas de l'échelle des priorités en raison de ressources limitées, mais de telles études pourraient soulever plus d'intérêt si elles étaient financées par des pays donateurs.

Autre obstacle : l'absence de personnel formé pour effectuer des études sur la sexualité. Même dans les pays développés, il existe relativement peu de spécialistes de la recherche sur le comportement sexuel. Étant donné les tabous entourant la sexualité, il n'est pas surprenant que la recherche sur la sexualité soit soumise elle aussi à des tabous, si bien que certains universitaires ont décidé de ne pas s'aventurer dans le domaine, de crainte de compromettre leur carrière professionnelle. Dans son article, Allgeier souligne que certains professeurs d'université hésitent à admettre qu'ils effectuent des études sur les relations sexuelles.

La plupart des travaux sur le comportement sexuel ont été menés dans les pays industrialisés, plus particulièrement aux États-Unis. Par conséquent, plusieurs des généralisations concernant le comportement sexuel ne reposent que sur un petit nombre de cultures. Toutefois, même dans les pays où la plupart de la recherche a été effectuée jusqu'à maintenant, des attitudes répressives, comme l'évoque Allgeier, ont entravé la collecte de données, surtout en ce qui concerne des sujets comme la sexualité infantile. En outre, faute de fonds, peu de grandes enquêtes ont été menées sur le comportement sexuel bien que, en raison de la menace du sida, il soit beaucoup plus facile à l'heure actuelle de faire de la recherche sur la sexualité. Cela vaut autant pour les pays industrialisés que pour les pays du Tiers Monde. Ainsi, en 1988, dans le cadre d'une enquête sur les jeunes et le sida, une vaste enquête a été menée au Canada sur le comportement sexuel des étudiants. Pourtant, il y a à peine quelques années, les chercheurs étaient contraints d'éviter de poser toute question de nature sexuelle à un échantillon semblable d'étudiants. Dans son article, Adeokun souligne que dans les pays africains, très peu de personnes refusent de collaborer, vu le spectre du sida.

En outre, c'est également à cause du sida que les chercheurs peuvent obtenir un financement d'organismes internationaux. Le Service de recherche sur le comportement social [?] de l'Organisation mondiale de la santé (OMS/Programme mondial de lutte contre le sida) joue un rôle clé pour initier des recherches interculturelles sur le comportement

sexuel dans divers pays. Comme Adeokun l'a mentionné, l'OMS a mis au point un questionnaire normalisé que l'on utilise à présent dans plusieurs pays pour interroger les répondants au sujet de leurs relations sexuelles. D'autres organismes internationaux comme AIDSCOM s'intéressent également à la recherche sur la sexualité.

Bien que de nos jours le sida constitue le point de départ de bon nombre de projets de recherche sur la sexualité, la tendance actuelle consiste à envisager la question plus vaste de la santé sexuelle. La santé sexuelle comprend non seulement le sida et les autres MTS, mais aussi plusieurs autres aspects de la sexualité. La culture détermine largement en quoi consiste la santé sexuelle, car les concepts touchant la sexualité varient d'une culture à une autre.

Les questions interculturelles

Comme en fait état l'article de Sittitrai et Barry, la notion de virginité se prête à diverses interprétations, selon le contexte. Par exemple, le coït peut être associé aux relations sexuelles bucco-génitales. Dans certaines sociétés, il est acceptable pour un homme d'avoir une maîtresse rémunérée : cela ne serait pas défini comme étant de la prostitution. Par ailleurs, comme l'a souligné Allgeier, dans certaines sociétés comme le Brésil, un homme peut pratiquer le coït anal sur autre homme sans que cela soit considéré comme étant un comportement homosexuel, à condition qu'il y joue le rôle actif. Ces diverses conceptualisations rendent difficiles les comparaisons interculturelles; néanmoins, ces dernières ne sont pas impossibles : il suffit que les chercheurs se préoccupent des différentes définitions culturelles.

Idéalement, les chercheurs utiliseraient les mêmes questions dans le cadre de travaux interculturels, mais les différences culturelles pourraient dénaturer à ce point le sens de certaines questions que la comparaison entre les cultures ne porterait aucunement fruit. La traduction des questions dans une autre langue peut également en déformer le sens. Pour contourner ce problème, on pourrait faire traduire la question vers la langue d'arrivée pour ensuite la faire retraduire par quelqu'un d'autre vers la langue de départ.

Les chercheurs doivent être conscients du fait que des changements culturels surviennent parfois rapidement. Cela vaut particulièrement dans le cas de l'épidémie de sida; ainsi, certains pays qui s'étaient opposés en premier à la recherche sur la sexualité en sont venus à l'accepter dans un laps de temps relativement court.

Il faut appliquer parfois des méthodologies de recherche différentes à des contextes culturels différents. Ainsi, dans les sociétés où le degré d'alphabétisation des habitants est peu élevé, il serait impossible de faire usage de questionnaires écrits. Comme Catania l'a mentionné, les personnes qui ne sont pas habituées à une conceptualisation mathématique peuvent éprouver une certaine difficulté face à une échelle de réponse de type Likert, qui suppose une évaluation fondée sur divers degrés d'appréciation. Chose certaine, il faut porter une attention particulière à la conception des projets de recherche portant sur différentes cultures.

La conception des projets de recherche

Pour en arriver à un plan de recherche particulier, nous devons, à titre de chercheurs, d'abord définir nos objectifs. Nous devons décider ce que nous voulons savoir et choisir notre source d'information. De même, nous devons déterminer quel usage on fera des résultats de la recherche. Dans son article sur les méthodes qualitatives, Zeller décrit en bref les trois principaux objectifs de la recherche :

- l'inférence causale;
- la confirmation et la généralisation; et
- l'exploration.

Respectivement, ils sont fondés sur l'expérience classique, les méthodes quantitatives (échantillon d'enquête) et les méthodes qualitatives. Zeller présente les principaux points forts et les limites de chacune des approches méthodologiques.

Par exemple, un objectif pourrait être de déterminer le comportement risqué de la population adulte. Les chercheurs pourraient obtenir un échantillon aléatoire de la population et poser des questions portant sur les facteurs de risque liés au sida : nombre de partenaires, genre de pratiques sexuelles et utilisation du condom. Si les données portent à croire qu'il y a une prévalence plus élevée d'infection au VIH dans certains groupes de la société, les chercheurs peuvent alors faire porter leurs efforts sur ces groupes précis. Par exemple, bon nombre d'études effectuées dans les pays de catégorie I ont porté sur le comportement sexuel

d'homosexuels masculins. Dans les pays de catégorie II, les prostituées ont souvent fait l'objet de recherches du genre. Les adolescents sont au centre de travaux de recherche dans de nombreux pays.

Lorsqu'il s'agit de recherche exploratoire et que le sujet particulier auquel on s'attache est assez mal connu, les méthodes qualitatives aident le chercheur à découvrir les questions clés, telles qu'elles sont définies par les sujets. Les deux méthodes qualitatives les plus importantes sont l'entrevue approfondie et le groupe de discussion. Alors que l'entrevue vise à recueillir, individuellement, des informations approfondies auprès de personnes précises, le groupe de discussion permet l'échange d'idées entre des participants ayant des intérêts communs. Dans son article, Zeller présente les aspects clés de l'entrevue et du groupe de discussion en s'attardant à ce dernier. Il souligne que bien qu'ils soient efficaces au plan des coûts, les groupes de discussion présentent certains inconvénients, notamment, de ne pas être représentatifs. Toutefois, une stratégie visant à contourner le problème consiste à former des groupes de discussion avec toutes les populations cibles possibles.

Le manque de ressources financières consacrées à la recherche constitue un facteur très important dont il faut tenir compte pour choisir une stratégie de recherche. À coup sûr, on doit prendre en considération la rentabilité pour en arriver à un juste milieu entre les approches qualitative et quantitative.

Plutôt que de discuter des méthodologies qualitatives et quantitatives comme s'il s'agissait de deux entités distinctes, les participants à l'atelier ont fait ressortir le lien d'interdépendance et de complémentarité qui unit ces deux approches. Par exemple, on peut utiliser à la fois des entrevues et des groupes de discussion en vue d'élaborer un questionnaire qui serait distribué à un vaste échantillon dans le cadre d'une enquête. Les entrevues personnelles et les discussions en groupes pourraient aussi servir à faire la lumière sur les résultats de l'enquête, ce qui aboutirait à une intégration des résultats.

Dans la plupart des cas, le chercheur doit être au fait des sources d'aide et de l'organisation du pouvoir dans la collectivité s'il veut mener à bonne fin un projet de recherche. Il importe aussi qu'il déploie des efforts considérables pour établir une relation privilégiée avec ses sujets. Idéalement, les sujets d'étude devraient participer à l'élaboration de la proposition d'un projet.

On doit choisir les interviewers avec soin. S'ils viennent de l'extérieur, ils peuvent avoir de la difficulté à établir une bonne relation et à gagner la confiance du sujet. Toutefois, s'ils sont trop proches du sujet, ce dernier peut s'inquiéter quant au caractère confidentiel de l'entrevue et se montrer moins ouvert dans ses réponses. Pickering (1988) laisse entendre que les femmes mariées sont moins susceptibles d'admettre qu'elles ont eu des relations sexuelles extra-conjugales, surtout s'il est question d'argent, à une autre femme de la même situation sociale. Elle laisse également entendre que le jeune célibataire est susceptible d'exagérer au sujet du nombre de ses partenaires sexuels, de façon à gagner en prestige lorsqu'il est interviewé par un pair.

Les chercheurs devraient faire preuve d'empathie afin d'en arriver à une compréhension plus complète du point de vue de leurs sujets. Cela soulève une question importante : la révélation de soi. L'interviewer peut établir une relation privilégiée avec le sujet en divulguant certains aspects de sa vie, mais il risque aussi par le fait même de s'aliéner la sympathie du sujet en faisant une révélation déplacée.

La réussite d'un projet de recherche peut tenir aux caractéristiques de l'interviewer. Dans beaucoup de sociétés, il serait tout à fait inacceptable qu'un homme interviewe une femme au sujet des relations sexuelles qu'elle a eues par le passé. De la même façon, dans certaines cultures, il serait déplacé pour une femme célibataire de poser des questions personnelles à propos du comportement sexuel. Le degré de scolarité de l'interviewer est également important. Il doit posséder un minimum de formation pour effectuer et enregistrer l'entrevue. Par contre, un interviewer dont le degré de scolarité est très différent de celui de ses sujets pourrait éprouver de la difficulté à établir une bonne relation avec ces derniers.

Bon nombre de questions déontologiques doivent être prises en compte, particulièrement en ce qui concerne le caractère confidentiel des renseignements et le droit de la personne à la vie privée. Les chercheurs doivent s'assurer que toute participation à une étude est volontaire et garantir que les renseignements demeureront parfaitement confidentiels.

Les mesures

En ce qui concerne les mesures, les chercheurs éparpillent trop souvent leurs efforts en élaborant le plus grand nombre de questions qui pourraient être reliées au sujet à l'étude. Ils devraient s'attacher davantage à définir les questions clés. Les modèles conceptuels, comme le modèle de réduction du risque de sida de Catania, pourraient les aider à orienter leurs recherches.

Pour la conception de leurs projets de recherche, les chercheurs doivent attacher une grande importance à la fiabilité et à la validité ainsi qu'à l'élaboration d'instruments de mesure. Dans son étude des habitudes sexuelles en Gambie, Pickering (1988) a fait usage de diverses techniques, notamment,l'observationethnographique des participants dans certains milieux comme les bars et les groupes de discussion, dans le cadre d'entrevues personnelles et au moyen de journaux personnels. Selon une de ses conclusions principales, environ la moitié des femmes ne semblent pas répondre honnêtement aux questions portant sur le nombre de partenaires et les antécédents de MTS. Alors que les hommes semblaient consigner fidèlement l'histoire de leurs contacts sexuels dans leur journal personnel, les femmes en général n'ont pas bien réagi à l'idée d'un tel journal. Cela laisse supposer que dans les sociétés où l'activité sexuelle est soumise à deux poids deux mesures, les femmes seraient moins enclines à faire état d'activités sexuelles ne correspondant pas aux normes établies.

À titre de chercheurs, nous devons nous préoccuper particulièrement de la validité de questions visant la modification du comportement sexuel. Ainsi, dans le cadre d'une enquête où il est dit que le sida constitue un problème grave, les personnes interrogées risquent de se sentir socialement contraintes de déclarer qu'ils agissent de manière responsable en modifiant leur comportement.

L'article de Catania présente une excellente analyse des nombreux facteurs qui jouent sur la fiabilité et la validité de la recherche sur la sexualité. Il fait ressortir que les méthodes qualitatives peuvent se révéler très importantes, en permettant à un chercheur de comprendre à fond les croyances et le langage sexuels du groupe cible. L'application des seules méthodes quantitatives en l'absence d'une telle compréhension pourrait produire des données erronées.

Catania souligne que les personnes sont plus ou moins disposées à révéler des renseignements d'ordre sexuel, non seulement à des chercheurs, mais aussi à des partenaires et à des amis. En particulier, celles qui ressentent une certaine culpabilité face à leur comportement sexuel sont moins susceptibles de s'ouvrir à ce sujet. Catania explique comment diverses méthodologies peuvent influer sur le taux de réponse dans ce genre d'étude. Il présente un argument solide, soit que les chercheurs devraient intégrer des variations méthodologiques dans la démarche envisagée, initiative que devraient encourager les organismes de financement. De plus, les chercheurs devraient s'efforcer davantage de détailler la méthodologie de leurs projets.

Catania propose quatre stratégies pouvant favoriser l'obtention de données plus fiables au cours d'entrevues :

- communiquer avec les personnes interrogées sans porter de jugements;
- utiliser des formules qui offrent une liberté de réponses ainsi que des termes sexuels que les personnes interrogées connaissent bien;
- prévoir des mesures qui tiennent compte du biais lié à la présentation de soi; et
- soumettre l'entrevue à des tests préliminaires exhaustifs.

La sexualité de la femme

D'une société à l'autre, les attitudes face à la sexualité féminine varient plus considérablement que celles ayant trait à la sexualité de l'homme. De façon générale, il est accepté que les hommes prennent plaisir aux relations sexuelles, mais, suivant les sociétés, les avis diffèrent quant au plaisir sexuel chez la femme. Dans certaines sociétés, les relations sexuelles de la femme sont perçues exclusivement comme étant liées à la reproduction et au plaisir procuré à l'homme, et la situation de la femme tient au fait qu'elle ait ou non des enfants. Dans d'autres sociétés, le plaisir sexuel est considéré comme important tant pour la femme que pour l'homme. Reste encore à déterminer le lien entre le comportement sexuel et les attitudes face au plaisir sexuel. Les hommes sont-ils plus susceptibles d'avoir des relations avec des prostituées dans les sociétés où on nie le plaisir sexuel de la femme? Les hommes sont-ils moins susceptibles de désirer avoir des relations sexuelles avec leur(s) épouse(s) s'ils

croient qu'elle(s) n'y prend(prennent) aucun plaisir? Sont-ils alors plus susceptibles de se tourner vers d'autres femmes, par exemple, des prostituées? Sans enquêtes sur les attitudes, l'on se perd en spéculations.

La sexualité de la femme ne saurait être étudiée isolément de celle de l'homme. Adeokun donne l'exemple de nombreux pays africains où des tabous proscrivent les relations sexuelles au cours de la période de lactation ou des menstruations, ce qui explique les relations extra-conjugales des hommes.

Que se passe-t-il dans la vie de couple lorsque l'homme cesse d'avoir des relations extra-conjugales? L'homme devient-il plus exigeant dans sa relation principale? En quoi consistent les négociations sur les pratiques sexuelles? Sur ce point, Allgeier souligne que les femmes n'ont souvent pas les aptitudes de négociation qui leur permettraient d'éviter les propositions sexuelles qu'elles ne souhaitent pas. Les femmes ont-elles le pouvoir requis pour obtenir des pratiques sexuelles plus sûres?

De quelle façon attitudes et pratiques changent au cours d'une vie? À l'heure actuelle, nous avons à étudier la sexualité féminine de façon à la comprendre dans le contexte du cycle complet de la vie. De plus, nous devons analyser la sexualité de la femme sous divers aspects : la personne, le couple, la famille et la collectivité. Nous connaissons aussi peu de choses de l'influence d'institutions économiques et religieuses ainsi que de perspectives régionales et nationales. Comme Sittitrai et Barry, Adeokun souligne que la pauvreté peut servir pour une bonne part à expliquer les relations extra-conjugales des femmes et par ailleurs la décision de s'adonner à la prostitution.

À l'heure actuelle, de nombreuses études portent sur les prostituées parce qu'on les considère comme d'importantes sources de transmission du VIH dans bon nombre de pays. Il faut certainement étudier ce groupe davantage, surtout pour ce qui touche l'usage du condom. Cependant, comme le souligne Allgeier, les clients de prostituées ont fait l'objet de peu d'études, et il nous faut aussi étudier ce groupe davantage.

La diffusion et l'utilisation des résultats de recherche

Par le passé, les chercheurs de pays industrialisésont exploité les pays du Tiers Monde en y recueillant des données sans consulter la population locale au sujet de ses besoins. Quelquefois, les résultats n'ont même pas été partagés avec les pays en cause. Lorsqu'il y a eu collaboration, le partage des résultats des travaux ne doit pas se produire qu'en une seule occasion, au terme d'un projet de recherche. Il faut une collaboration soutenue, nécessitant un effort délibéré dès le début de la recherche. La contribution des collègues de pays du Tiers Monde n'est pas toujours reconnue à juste titre, les chercheurs de l'étranger insistant souvent de figurer en tête de liste des auteurs.

Les chercheurs doivent être prêts à répondre aux questions à la fin d'une entrevue. La collecte de données, notamment sur la prévention du sida, risque de piquer la curiosité des gens et les chercheurs doivent être prêts à fournir des renseignements sur les comportements visant à prévenir le sida.

La recherche peut contribuer à identifier les connaissances erronées des gens et à modifier les campagnes d'information. La plus grande utilité de l'approche comportementale est d'aider les planificateurs de programmes à mieux comprendre les tendances dans le comportement des gens et à déterminer ceux qu'il importe de changer.

Les conclusions d'une étude devraient être largement diffusées parmi les sujets sur laquelle portait l'étude ainsi qu'à la collectivité et aux dirigeants des pays, particulièrement aux décisionnaires. Les résultats de l'étude devraient être présentés sous une forme intéressante et utile, tant pour les hommes politiques que pour les professionnels de la santé et de l'enseignement. Ils devraient aussi être diffusés par les principaux mass-media.

Souvent, les conclusions des études effectuées dans des pays du Tiers Monde ne sont pas publiées. Ainsi, les autres chercheurs n'y ont pas accès et il est impossible de créer une base de connaissances scientifiques permettant d'expliquer certaines constantes d'une culture à l'autre en matière de sexualité. Cette situation est largement attribuable à l'insuffisance des ressources affectées à l'analyse et à la publication de données. Les organismes de financement devraient consacrer suffisamment de

fonds à cet aspect important de la recherche de même qu'encourager les chercheurs à diffuser les résultats de leurs recherches dans les milieux scientifiques.

La modification du comportement

Avant de mettre en oeuvre des programmes de modification du comportement, il faut procéder à des études de base afin de bien déterminer la nature des comportements à modifier. Par ailleurs, il faut être conscient des contraintes politiques et sociales touchant les stratégies envisagées. Par exemple, certains décisionnaires peuvent censurer le langage explicite utilisé pour discuter de la modification des pratiques sexuelles.

La recherche visant à étayer la modification du comportement devrait s'appuyer sur une conception plus large de la santé sexuelle, qui comprendrait aussi bien les aspects émotifs et sociaux que les aspects physiques de la sexualité. Elle repose sur le postulat qu'il est possible de modifier certains comportements pour améliorer la santé sexuelle des gens et que pour prévenir le sida, les options qui s'offrent à eux au plan du comportement sont la continence, la monogamie, la réduction du nombre de partenaires, la masturbation et l'usage du condom et de spermicides. En outre, on peut empêcher la propagation du VIH en cherchant à éviter ou en traitant tôt les autres MTS. On ne s'attend pas à ce qu'un groupe adopte toutes les modifications possibles; il adoptera probablement celles qui cadrent bien avec ses pratiques.

L'article d'AIDSCOM sur la modification de comportement traite de ces options. Il y est dit qu'une diminution du nombre de partenaires réduira considérablement l'incidence de nombreuses MTS, mais que l'effet sur la transmission du VIH sera limité. Toutefois, l'utilisation du condom et l'adoption de pratiques sexuelles plus sûres sont davantage susceptibles de réduire la propagation du virus.

Le même article expose en bref les stratégies qui s'imposent si l'on veut modifier certains comportements :

- définir les groupes cibles;
- évaluer la situation actuelle au moyen de techniques propres à l'étude de marché;
- définir le contenu du message à transmettre;
- déterminer les voies de transmission du message; et
- évaluer constamment le programme d'éducation.

Les campagnes fondées exclusivement sur la peur sont peu susceptibles de modifier les comportements. Bien qu'un individu puisse percevoir les risques auxquels il s'expose, ce que peut transmettre clairement les messages alarmistes, il est essentiel qu'on lui montre des façons constructives d'éviter le problème et le rôle qu'il est appelé à jouer. Si l'on éveille chez lui une crainte trop grande, il peut se sentir paralysé et ne pas agir de façon responsable ou adopter une attitude défaitiste face au destin.

Les programmes de promotion de la santé sexuelle, y compris ceux portant sur les pratiques sexuelles sûres, devraient préciser comment l'adoption d'un autre comportement peut permettre à deux partenaires d'avoir une meilleure relation et d'obtenir une plus grande satisfaction sexuelle. Les campagnes d'information à elles seules ne peuvent suffire à entraîner une modification du comportement sexuel, mais pour savoir ce qu'est la prochaine étape, tout dépend du contexte.

Toute campagne visant la modification du comportement doit porter sur l'amélioration des aptitudes de communication des personnes concernées. Il est difficile pour les gens d'adopter des pratiques sexuelles plus sûres s'ils ne possèdent pas les aptitudes pour discuter de ces questions. Or, bon nombre de gens éprouvent de la difficulté à discuter ouvertement des questions d'ordre sexuel et chaque groupe utilise un langage qui lui est propre pour décrire les activités sexuelles.

Les nouveaux comportements qui sont le résultat de programmes de lutte contre le sida doivent être renforcés. Sinon, comme pour bien d'autres initiatives de promotion de la santé, les gens sont susceptibles de reprendre d'anciens comportements dangereux. L'appui social, notamment par les groupes de pairs, peut aider les personnes à continuer d'adhérer au nouveau comportement.

La façon de mesurer les changements soulève des questions complexes. Trop souvent, les évaluations ne mesurent que les changements cognitifs et non comportementaux. Nombre de variables peuvent venir fausser les données, variables qu'il est difficile de contrôler. De plus, il faut aller au delà d'un simple enregistrement des modifications

observées et s'appliquer à comprendre comment et pourquoi les changements sont survenus.

La commercialisation des condoms

Les attitudes face à l'usage du condom et les facteurs inhibant ou facilitant ce moyen prophylactique devraient être prioritaires dans l'étude de la sexualité. Cela suppose l'étude de la valeur culturelle que les gens prêtent au condom ainsi que des variables sociales, psychologiques, économiques, religieuses et politiques qui influent sur son utilisation. Afin d'en arriver à des programmes plus efficaces visant à promouvoir l'usage du condom, il faut mener des enquêtes interculturelles, surtout auprès des personnes qui ont plusieurs partenaires sexuels, notamment les prostituées et leurs clients. Voici quelques questions qui demandent réponse :

- Quel est le rapport entre la nature de la relation entre partenaires (relation à long terme, passade ou aventure d'un soir) et l'utilisation du condom?
- Le condom est-il utilisé correctement (par exemple, est-ce qu'on l'enfile avant la pénétration et que l'on s'en sert une seule fois)?
- Quelles sont les perceptions locales concernant la transmission du VIH? Quels sont les besoins, selon les gens, pour le contrôle des MTS?
- Quels moyens des pays comme le Japon ont-ils pris pour réussir à faire largement accepter l'usage du condom et comment cette expérience pourrait-elle servir à améliorer les approches de commercialisation dans d'autres pays?
- Pourquoi certaines personnes utilisent avec succès le condom alors que d'autres ne le font pas?

Munis de réponses à ces questions, nous serions en mesure de lancer des campagnes visant à faire de l'usage du condom une norme en matière de relations sexuelles.

La commercialisation du condom doit être accompagnée par des stratégies d'éducation à long terme et emprunter diverses voies de communication, aussi bien celles associées aux milieux scolaires et communautaires que les mass-media. Les campagnes d'éducation pourraient viser entre autres à encourager l'intégration du condom aux fantasmes sexuels. Les enfants devraient être sensibilisés tôt à l'usage du condom de façon à se sentir à l'aise de l'utiliser à l'adolescence. Les professionnels de la santé ou autres devraient assister à des ateliers sur la façon de promouvoir l'usage des condoms. Pour la commercialisation du condom, on peut faire appel à des modèles de comportement jouissant d'une certaine popularité, comme les vedettes masculines et féminines du monde des sports et de la musique.

Il faut rendre le condom plus accessible, notamment en cherchant à convaincre les décisionnaires et en travaillant de concert avec ces derniers pour assurer l'approvisionnement en condoms (soit par la fabrication locale ou les importations), établir des réseaux de distribution efficaces (relevant des secteurs public ou privé, ou encore des deux). Il faut également prendre en compte le problème de la détérioration du condom durant l'entreposage, surtout dans les régions au climat chaud et humide. Il faut inciter les gens à se débarrasser des condoms usés de façon sécuritaire pour éviter les risques de transmission du VIH dans les cas où le sperme est infecté. Les pays industrialisés devraient s'assurer que d'autres pays n'héritent de leurs condoms défectueux. La fiabilité du condom passe par un contrôle de la qualité. Le condom lui-même doit être facile à utiliser : il pourrait être offert dans un emballage attrayant portant des diagrammes ou des directives faciles à comprendre. Il doit être conçu de façon à être agréable à utiliser, avec suffisamment de lubrification pour empêcher une friction désagréable pour la femme. Le prix du condom doit être abordable. Cela pourrait supposer des subventions gouvernementales.

Parmi certaines croyances bien connues militant contre l'usage du condom, signalons : l'opinion que l'on ne peut pas s'y fier (malgré les importants succès enregistrés pour réduire le nombre d'infections au VIH); l'opinion de certaines personnes, surtout des hommes, qui croient qu'il réduit le plaisir sexuel; l'opinion que l'achat de condoms ou le fait de l'enfiler devant un partenaire (ou de lui demander d'enfiler un condom) est humiliant; l'opinion, dans certaines sociétés, que les relations sexuelles ne sont pas complètes si l'homme n'éjacule pas à l'intérieur du vagin. Étant donné telles croyances, le condom est peu susceptible d'être accepté.

Chose certaine, chercheurs ou autres visant à promouvoir la santé ont un défi de taille à relever et toutes les personnes oeuvrant dans ce domaine

doivent s'appuyer les unes les autres. En fait, les personnes qui participaient à la rencontre dédiée aux problèmes de al recherche concernant la sexualité ont exprimé le désir de créer un réseau formel de personnes ressources après cette conférence.

L'établissement de réseaux

Des réseaux sont déjà établis dans le cadre du Programme mondial de lutte contre le sida de l'OMS et l'on espérait que le CRDI serve de catalyseur pour établir un réseau des participants à l'atelier tenu à Ottawa. On a proposé notamment d'établir cinq ou six centres régionaux qui serviraient de base au réseau, soit des centres multidisciplinaires bénéficiant d'un financement à long terme pour permettre de mener à bien de projets de collaboration. Ces centres profiteraient aussi des services de professionnels de la santé et d'experts en sciences humaines, spécialistes de l'étude du comportement sexuel, ainsi que de l'échantillonnage, de la conception de projets et de l'évaluation de programmes.

Un ou plusieurs centres pourraient être des centres internationaux de ressources où sont regroupées les bases de données pour la recherche sur le comportement sexuel. Ces centres auraient pour mandat de tisser des relations étroites avec les chercheurs du monde entier en plus d'obtenir des informations au jour sur les activités en cours, les publications et les instruments associés à la recherche dans le domaine. Sans un tel centre d'information, les chercheurs perdent beaucoup de temps à reproduire le travail des autres.

Pour enregistrer de véritables progrès, il faut en outre que les chercheurs reçoivent une formation appropriée sur la façon de mener une recherche sur le comportement sexuel. Ainsi, il faut prévoir dans le cadre de ce réseau une formation, à court et à long terme, notamment à l'intention des chercheurs du Tiers Monde.

Conclusion

L'épidémie de sida a donné une impulsion certaine à la recherche sur le comportement sexuel. La recherche fondamentale dans ce domaine est nécessaire, non seulement pour prévenir le sida, mais aussi d'autres MTS. En outre, l'information recueillie bénéficiera aux programmes de planification familiale et aux initiatives portant sur les troubles sexuels. Les participants à l'atelier tenu à Ottawa ont demandé la multiplication des recherches sur le comportement sexuel et ils ont soutenu le CRDI, qui accorde la plus grande priorité à ce genre de recherche.

Qualitative Approaches to the Study of Human Sexuality

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Résumé en français. *La sexualité humaine est un domaine à la fois des plus fascinants et des plus ardus. Les grandes questions de la vie tournent autour de la sexualité. La sexualité procure le plaisir; elle domine l'imagination; elle peut aussi bien créer des affinités que souligner des divergences et parfois, elle insuffle la vie.*

Cerner, décrire et évaluer des approches qualitatives visant l'étude de la sexualité humaine dans un contexte général et dans celui, plus particulier, de la transmission du syndrome d'immunodéficience acquise (SIDA), tel est l'objet du présent article.

Concevoir un projet de recherche, c'est créer une situation dans laquelle les chercheurs finiront par apprendre ce qu'ils désirent savoir. Pour concevoir un tel projet, il faut indiquer clairement ce que les chercheurs désirent « savoir »; faire en sorte que les chercheurs apprennent « ce qu'ils désirent savoir » en respectant les règles de la preuve scientifique; et adapter le projet en fonction des possibilités et des contraintes d'ordre pratique, social, politique et déontologique qui bornent les travaux expérimentaux.

Chacun de ces critères fait partie d'un seul ensemble. Concevoir un projet de recherche rentable est un art en vertu duquel on créera une situation où les chercheurs parviendront à déterminer le plus précisément possible ce qu'ils recherchent en respectant le plus fidèlement les règles de la preuve scientifique, au coût le plus bas et dans le cadre délimité par différentes contraintes.

Trois grands objectifs – déduction, vérification-généralisation, exploration – sont au coeur de la recherche. La réalisation de ces objectifs repose sur des méthodes appropriées. La déduction est le produit de l'expérimentation classique. La vérification-généralisation est issue de méthodes quantitatives, notamment l'étude d'un échantillon. Pour sa part, l'exploration relève de méthodes qualitatives.

Chaque objectif exige la formulation d'importantes hypothèses sur le cadre expérimental et les résultats que le chercheur compte en retirer. Chaque méthode constitue une occasion appréciable d'élargir nos connaissances sur la sexualité humaine, compte tenu de l'objectif recherché. Cependant, chaque méthode comporte également une grave lacune puisqu'elle peut déboucher sur des conclusions erronées.

La recherche sur la sexualité humaine soulève des questions d'ordre éthique que les chercheurs devraient examiner. Ces questions sont issues de conflits entre des valeurs bien ancrées. Un problème capital à cet égard, quand la recherche porte sur des personnes, a trait au conflit éventuel entre l'utilité des connaissances acquises et les risques courus par les personnes fournissant l'information.

Quand la recherche vise des buts généraux, exige des données

qualitatives ou qui ne viennent pas immédiatement à l'esprit du répondant et (ou) touche un problème préalablement mal connu et pour lequel on ignore l'éventail de réactions possibles, la méthode idéale pourrait bien être celle du groupe cible où l'on tente de cerner attitudes, croyances, opinions, goûts, valeurs et comportements d'une tranche précise de la population. Le groupe cible convient particulièrement lorsqu'on s'interroge sur la pertinence des questions et des problèmes soulevés par la recherche.

Le recours aux approches quantitatives et qualitatives pour l'étude de la sexualité humaine résulte de deux modèles scientifiques. L'approche quantitative repose essentiellement sur le modèle positiviste et l'approche qualitative, sur le modèle phénoménologique. Pris séparément, aucun des deux modèles ne crée une base épistémologique suffisante pour encourager l'élargissement des connaissances sociales, en raison de la dualité qui existe entre l'observation et la formulation.

Introduction

Human sexuality is simultaneously one of the most fascinating and one of the most challenging domains of inquiry. Major concerns in the lives of people revolve around their sexuality. Human sexuality is pleasurable activity; it dominates fantasy; it both establishes common bonds and identifies gulfs between people; and it occasionally conceives new life.

The purpose of this paper is to identify, describe, and evaluate qualitative approaches to the study of human sexuality in general and in the transmission of HIV and AIDS in particular. I have dealt with:

- Strategies for cost-effective research designs;
- Three major research objectives and the methods that best achieve them;
- Ethical issues;
- Exploratory qualitative methods, particularly focus-group research; and
- The positivistic and phenomenological paradigms of scientific research.

Cost-Effective Research Design

Research design is the art of creating a research situation in which researchers come to know what they want to know. The criteria for effective research design are that:

- "What they want to know" is defined concisely;
- That they "come to know what they want to know" in accord with the rules of scientific evidence; and
- How they "come to know" is consistent with the practical, social, political, and ethical opportunities and constraints that limit research activity.

Cost-effective research design is the application of the art at a minimum of cost. In human sexuality, the payoff for effective research design and study execution is that reliable and valid information can be used to direct policymaking. The aim, ultimately, is to ensure sexual activity is safe, satisfying, and attentive to the needs of the participants and the society. However, because resources are limited, researchers in human sexuality must concern themselves with the value of the information they obtain compared with the cost of obtaining that information. They must be cognizant of competing research needs particularly when they seek financial support from governmental and private agencies.

Researchers often provide inflated estimates of the value of the expected payoff to justify increased resources. When successful, this approach enhances resources and, in turn, diminishes the need for cost-effective research design. However, it makes good sense to obtain the maximum amount of insight and information at a minimum expenditure of resources, and sensible researchers constantly search for strategies to discover cost-effective research designs. They:

- Analyze carefully research objectives;
- Know which research methods best achieve which objectives;
- Blend investigations so that multiple objectives can be addressed within a single research project; and
- Seek cooperative, collaborative efforts to enhance the degree that results satisfy the research objectives.

Research Objectives

The three major research objectives can be paired with the methods that best accomplish them (Table 1). Each objective requires major assumptions about the research and what the researcher wants to learn from it. Each method provides an opportunity for the enhancement of knowledge but can be the source of erroneous conclusions when used incorrectly.

Causal Inference from Classical Experiments

When researchers wish to infer causes from research findings, they can use classical experiments. The classical experiment establishes causality by:

- Creating circumstances in which the presumed cause occurs and other potential causes or influences are controlled;
- Demonstrating the relationship between the presumed cause and the presumed effect; and
- Rendering moot all alternative interpretations for the relationship.

Rendering moot all alternative interpretations requires that "all other things be equal," i.e., *ceteris paribus*.

In the classical experiment, researchers randomly assign the presumed cause to experimental subjects. "Random assignment is the great *ceteris paribus*" (Cook and Campbell 1979, p.5). Establishing that all other things are equal through random assignment provides the classical experiment with its well-earned reputation of being the most powerful research design for enabling causal inferences.

The major weakness of the classical experiment is that in noncontrived circumstances, all other things are not equal. Thus, the classical experiment's reputation for power in establishing causal inference comes at a price. The price is that, for any research question, the classical experiment is constrained practically, socially, politically, and ethically.

Other weaknesses are that the results of classical experiments cannot easily be generalized to large populations or to conditions outside the artificial laboratory setting. Often, causal variables cannot be controlled by the experimenter, so the research design in inapplicable. Also, as with all research techniques, the lack of prior knowledge about important concepts and measurement reliability and validity are constant concerns.

To achieve most of the benefits of the classical experiment while avoiding many of the constraints, Cook and Campbell (1979) argue for use of quasi-experimentation. Their discussions of causal inference (p.1-36) and validity (p.37-94) are classic and deserve attention.

According to Cook and Campbell (1979, p.6),

> Quasi-experiments [are] experiments that have treatments, outcome measures, and experimental units but do not use random assignment to create the comparisons from which treatment-caused change is inferred.... The task confronting persons who try to interpret the results from quasi-experiments is ... separating the effects of a treatment from those [of an] initial noncomparability between the average units in each treatment group; only the effects of the treatment group are of research interest. To achieve this separation of effects, the researcher has to explicate the specific threats to valid causal inference that random assignment rules out and then in some way deal with these threats.

For example, to determine whether condoms block the transmission of STDs, one could use a classical experimental design, with men who test negative for STDs: each man would be randomly assigned for a specified time, either to use or not to use condoms during sexual intercourse. At the end of the time specified, each participant would be tested for STDs again. If the men comply, actually using or not using condoms as assigned, the efficacy of condoms in preventing the spread of STDs will be measurable. The results would strongly support causal inferences because all other things would be deemed equal because of random assignment of subjects.

For practical and ethical reasons, this classical experiment will not be conducted. Nevertheless, researchers still want to explore the effects of condom use on the transmission of STDs. To do so, they may turn to the quasi-experiment. They employ the same research design but, instead of randomly assigning men either to use or not to use condoms, they could ask the men who test negative for STDs whether they use or do not use condoms. At the end of a specified time, each participant would be tested for STDs again, and, if condoms are effective at preventing STD transmission, then the STD prevalence among participants who use condoms will be lower than that for participants who do not use condoms.

However, this is not a strong causal inference, because all other things are not equal. Men who use condoms may differ from those who don't in ways

other than the use of condoms. For example, men who use condoms may take other precautions against STD exposure more often than do men who do not use condoms. These precautions can include fewer partners, more judicious selection of partners, and partners' use of spermicides. Any one of these other precautions could produce differences in STD incidence. As Cook and Campbell (1979, p.6) pointed out, the researcher who uses the quasi-experimental design is charged with the task of explicating these threats to valid causal inference and dealing with them. The classical experimental researcher need not do this because the subjects have been chosen at random for the treatment conditions.

Confirmation and Generalization from Quantitative Methods

When the research objective is to confirm and to generalize the existence of a trait in known populations, then the quantitative method or the sample survey is the most appropriate tool. The sample survey confirms the existence of the trait by quantitative, statistical tools; then it allows generalizations on the basis of probability sampling from known populations.

The major strength of quantitative methods is that the statistical tools and the sampling techniques necessary for effective confirmation and generalization are known and widely used. The weaknesses derive from the difficulty in selecting a representative sample of respondents and the difficulty in phrasing questions so that the respondent knows and is willing to reveal the answer. Finally, as with all research techniques, the lack of prior knowledge about important concepts and measurement reliability and validity are constant concerns.

The factorial survey (Rossi and Anderson 1982; Jasso 1988) is a clever combination of the research design ideas contained within the classical experiment and the sample survey, capitalizing on the advantages of both. The tectorial survey uses vignettes (brief descriptions of social situations) to simulate *ceteris paribus* and the orthogonality of independent variables. It also surveys a sample so that the researcher can confirm and generalize the findings. Rossi and Anderson (1982) illustrate the factorial survey on the issue of sexual harassment. This method holds great promise for human sexuality researchers. Dr Catania's paper in this publication is dedicated to achieving maximum benefit from quantitative methods while avoiding their constraints.

Exploration Using Qualitative Methods

When the research objective is to define the conditions in which research is undertaken – that is, although the researcher has some vague ideas about the domain of inquiry but major aspects are unknown or "suspect," – the strategy is qualitative research. This approach allows researchers to discover the ideas, concerns, attitudes, values, and approaches of people, in their own terms. In qualitative research, a premium is placed upon obtaining insight into the way that a sample of members of the target population see, define, and justify the world. The researcher gains an empathetic understanding of what is important to the participants and why.

The value of this approach was dramatically illustrated by E.R. Allgeier's (1988, p.14) discussion of the *So* tribe in the semi-arid mountains of northeastern Uganda. Allgeier notes that there were no *So* words for masturbation, love, or contraception. To Allgeier's question: "What can you do if you don't want any more children?", the *So* responded with "... the same sort of astonishment that you might express if someone asked: "'What can you do if you no longer want your legs?'"

When the objectives of research are exploration, insight, and empathy, the major strategy is qualitative methods. The major strength of qualitative methods is their potential to provide useful information about how those of interest define the topic of interest.

For example, policymakers seeking a reduction in AIDS transmission may want to ensure the availability of condoms for members of at-risk groups. However, the members of the at-risk groups may not want to avail themselves of the condoms because of concerns about diminished sexual pleasure, embarrassment in the use of a condom, or a redefinition of the sexual relationship given the attribution of responsibility for protection against pregnancy and disease transmission. For a policy to be effective, it must be consistent with the conditions or definitions it is designed to influence. This is true whether the policy has been designed to encourage exports or to change sexual behaviour.

In general, the weaknesses of qualitative research are that it cannot easily establish causal relations among variables, confirm empirical regularities, or generalize results to populations. Finally, as with all research techniques, the lack of prior knowledge about important concepts and measurement reliability and validity are constant concerns.

Ethical Issues

No matter what the research design, research with human beings raises ethical questions. The questions become issues when the design conflicts with strongly held values. A major ethical issue concerns the potential conflict between the value of the knowledge produced by the research and the risk to the people on whom information is obtained.

On the one hand, research is conducted because of the desirability of obtaining reliable and valid information. As applied to human sexuality, the result of participation of human subjects in research could enhance human happiness and reduce the transmission of dreaded STDs.

On the other hand, research with human beings may harm, or at least fail to benefit, the participants. For example, researchers may develop a vaccine that they believe and hope will protect people against infection by AIDS. Then policymakers will be faced with a question: Should this vaccine be provided to the general public? If the vaccine is effective and not exorbitantly expensive, they will want to make it generally available but if it's not effective, it should not be provided regardless of cost.

The policymakers seek evidence from the researchers about the effectiveness of the vaccine. Since the research objective is causal inference, researchers recommend a classical experiment in which high risk subjects are randomly assigned to receive or not to receive the vaccine.

If the vaccine is effective at preventing AIDS, the human condition will be enhanced by widespread use of the vaccine and the corresponding arrest of the spread of AIDS. At the same time, however, those subjects in the research who did not receive the vaccine have been arbitrarily denied the vaccine's benefit. Such a benefit denial could cost them their lives. Thus, researchers must build in monitoring so that any differences in the treatment groups' well being are clear as early as possible. Societal benefits from obtaining knowledge may come at substantial costs to the individual, and researchers must be prepared to deal with these ethical dilemmas.

Another example is the major ethical dilemma faced by qualitative researchers. On the one hand, it is well known that people behave differently when being observed. If a researcher reveals his or her identity to the people being researched, they are likely to alter their behaviour.

On the other hand, if the researcher does not reveal his or her identity, then people are being studied without their knowledge or consent. The ethical principle of informed consent is that people have the right to choose whether to participate in research, the right to know what the research aims to do and how it may affect them.

Some other ethical questions are specific to the type of qualitative research.

Types of Qualitative Methods

Qualitative methods include participant observation, focused interviewing of key informants, and focus groups. Each has major strengths in achieving the research objectives of exploration, insight, and empathy. Each also has weaknesses that hinder the achievement of these research objectives.

Participant Observation

Participant observation involves the recording of observations by an investigator participating in a natural social setting. Information is obtained firsthand by face-to-face interactions with the people being researched. Participant observation has as its goal "deep, rich" observational data. Ordinarily, the investigator engages in direct contact with the people for prolonged periods. Months and years were spent by Suttles (1968), Gans (1962, 1967), and Whyte (1955) in participant observation.

The participant observer must decide:

- Whether to enter the area as a "known" researcher or to disguise his or her purposes;
- How to gain entry into the field;
- Whether and, if so, how to use informants; and
- How to deal with opportunities and limitations on rapport.

For example, Humphreys (1970) wanted to study homosexual encounters in public bathrooms.

To avoid detection, the participants in such encounters often post a lookout to warn against intrusion by strangers or the police. Humphreys presented himself as available for this role so that he could observe the "private" behaviour without divulging his true purpose. This approach to the gathering of research data is probably not ethical.

To conduct research, participant observers need entry and freedom within organizations – a freedom that does not always appeal to those who manage organizations and want to maintain a positive public image. Skilful negotiations and the development of mutual trust aid in achieving entry. However, entry granted by those at some levels of an organization implies suspicion among those at other levels, and the participant observer must overcome the attitude, perhaps by adopting the role as helper. Frequently, participant observers find it helpful to seek informants, who possess unique knowledge or a unique perspective.

Standard advice to field workers is to earn the trust of and establish rapport with the people who are the focus of their research. However, trust from members of one group may well imply suspicion from another. Moreover, the degree to which rapport can be established may be limited by one's social and demographic characteristics. Finally, although some suggest "acceptable incompetence" or naïvété as a strategy designed to get the members of a group to provide instructional information (Lofland and Lofland 1984), play-acting has practical and ethical limits in a research setting.

Some research objectives call for participants to be representative of target populations; others do not. Talking to the wrong people is as sure a path to erroneous conclusions as is eliciting the wrong information. Researchers must determine the desirability of following a representative population.

Similarly, they must determine the appropriateness of different measurement techniques, selecting and presenting evidence they consider appropriate. These problems are particularly acute for participant observation because exploratory research objectives are not as precisely specified as research objectives like causal inference, confirmation, or generalization.

As a research method, participant observation is labour-intensive; it violates numerous social and political conventions, and its use presents the researcher with ethical dilemmas on informed consent, protection of respondents, confidentiality of information, etc. Despite its strengths, participant observation is often not a cost-effective design.

Focused Interviewing of Key Informants

Introduced by Merton and Kendall (1946), the focused interview seeks in-depth qualitative information from specific individuals – key informants who have functioned under particular conditions or who are privy to valuable information. The interviewer follows a guide that establishes the major areas of inquiry, focusing on the experiences of the key informant concerning these areas of inquiry. Merton and Kendall (1946, p.544) commented:

> A successful interview is not the automatic product of conforming to a fixed routine of mechanically applicable techniques. Nor is interviewing an elusive private and incommunicable art. ... situations and problems [recur] in the focus interview [and] can be met successfully by communicable and teachable procedures. We have found that the proficiency of all interviewers, even the less skilful, can be considerably heightened by training ...

Merton and Kendall suggested that a productive, focused interview is characterized by:

- Nondirection: a minimum of direction by the interviewer;
- Specificity: a concentration on the subject's definition of the situation;
- Range: a maximum of evocative stimuli and responses reported by the subject; and
- Depth and personal context: affective and value-laden implications of the subject's responses.

Thus, focused interviewing is valuable for obtaining insightful data. At the same time, it is labour-intensive and costly. Consequently, a researcher may wish to conduct focused interviews with a few key informants (i.e., three or four) and then switch to another research method.

Focus Groups

When the goals of research are general and call for qualitative data that are not necessarily readily recalled by respondents or when prior knowledge about a particular problem is minimal, the focus group is an appropriate research design. This type of research seeks to explore the attitudes, beliefs,

opinions, preferences, values, and behaviours of a population for whom the investigation is seeking to determine relevant issues and concerns.

In current research practice, the tendency is to assume that relevant issues and concerns about a topic are known. It is a serious risk for the researcher to assume a knowledge of the meanings that people attach to their actions and their social interactions. When consciousness and subjective meaning is of central concern in the interpretation of social behaviour, one can legitimately question the knowledge of outsiders such as researchers and sponsors.

The focus group is directly relevant to providing this information. The people convey their conscious and subjective meanings of social events and provide their interpretation of the social behaviour they and others exhibit. This element is too often lacking in survey methods.

When considering use of a focus group, the researcher can ask design questions that will clarify the appropriateness of the method for the research objective:

- Are focus groups necessary?
- Will focus groups provide the needed information?
- Is the focus group the best way of obtaining this information?
- On what topics is information needed?
- What is the target population?
- Who will be invited to participate?
- Why will they want to participate?
- What resources and facilities are required to complete the study?
- How much will the study cost?
- How long will the study take?
- Can participants be believed? (Do participants lie?)

The potential advantages of the focus group include the nature of the relationship between the researcher and the subject of research, the desire for insightful data about ongoing processes, and the flexibility of the technique. A major assumption underlying focus group research is that the belief systems of the participants are crucial. When a research objective involves assessing the attitudes, opinions, values, and desires of people in their own terms, researchers should consider the focus group.

The focus group is a discussion group that concentrates on a particular topic. Led by a well-trained moderator, a focus group discusses preselected topics, and researchers seek in-depth information in a setting which encourages input from participants. The rationale for focus groups is that, when a number of people are discussing an issue, all participants gain confidence to express their reactions and attitudes on the topic.

The focus group builds on the fact that the participants in the group interact with one another about shared interests. A focus group allows the researcher to experience the desires, satisfactions, frustrations, fears, and hopes of a group of real people. Bellenger et al. (1976) pointed out that the interaction in focus groups introduces spontaneity of responses, produces emotional involvement essential to obtaining thoughtful input, and encourages rapport and give and take in the exchange of attitudes, values, opinions, and behaviours.

Thus, the focus group is potentially a method of exploration that allows participants to express their concerns within a context that is scientifically useful. The focus group employs this community of interests and interaction to stimulate the flow of ideas and to provoke spontaneity and candor.

The major asset of a focus group is the interaction that occurs among the participants. An idea expressed by one participant stimulates thinking among others along lines that might not be pursued without the idea expressed by the first participant.

Focus group interviewing is an outgrowth of focused interviewing. Merton et al. (1956, p.135-169) introduced the concept, concentrating on:

- The setting (group size, composition, and spatial arrangements);
- The advantages (the release of inhibitions, the widening range of response, and the stimulation of forgotten details);
- The disadvantages (the inhibiting effect of the group); and
- The procedures for management (facilitating group activity, using the dead silence and the pregnant pause, regulating group interaction, etc.).

The phrase "focus group" is in common use in journals devoted to marketing and market research (*Marketing News*, *Marketing Times*, *Journal of Advertising Research*, *Advances in Consumer Research*, *Journal of Marketing*, *Advertising Age*). The descriptions of the methods tend to be short; I examined and found most were four pages or less. They usually listed features of the focus group or provided lists of assets and liabilities.

I believe that focus groups would materially benefit research in human sexuality. Krueger (1988), Morgan (1988), Greenbaum (1988), Calder (1977), and I (Zeller 1988) have all written about focus groups. Goldman and McDonald (1987) and Wells (1974) have discussed the more general topic of interviewing groups in depth. Sampson (1985) discussed qualitative research in Europe, as did Huber and Heinz (1982) for the German language. Contraception and family planning have been addressed in focus groups by Silverman and Singh (1986), Stycos (1981), Folchlyon and Trost (1981), Schearer (1981), Suyono et al. (1981), and Folchlyon et al. (1981). Yuhas (1986) reported on focus groups to explore the concept of romantic jealousy, and age of marriage was addressed in focus groups by Pramualratan et al. (1985). Focus groups have also been used for research in health care by Morgan and Spanish (1983), Festervand (1984-85), and Lambert (1986).

An overview of focus groups is worthwhile. They are usually composed of 8-12 carefully selected individuals. The size of the group is decided during research design, the aim being to maximize participation while minimizing the burden for each group member. Bellenger et al. (1976) noted that the burden on each individual is excessive with fewer than eight and that each member's participation is reduced with more than 12.

The individuals are a sample of a population that is homogeneous in the sense that each participant has experience with the phenomenon in question. As in survey research, the selection of the sample is crucial to the success of the focus group.

Scheduling and transportation are challenges in focus group research because a time and place must be found when participants can meet. The logistics complicate sample selection because of potential conflicts that arise from the schedule.

The participants should be representative of the target population. Usually, the target population is defined by social, as well as demographic, variables. If the researcher wishes to examine alternative contraceptive use among young married couples, then age and marital status are the appropriate demographic variables and contraceptive use is the appropriate social variable.

In areas where telephones are widely used, participants can be recruited and screened according to criteria on a questionnaire. The target population is defined demographically; individuals are selected through random digit dialing on the telephone; and the qualification questions are asked. Respondents who do not answer the questions consistently with the sampling criteria are thanked and the conversation ends. Respondents who meet the criteria are invited to participate in the focus group.

The focus groups on research seeking perceptual and attitudinal information must be homogeneous. For example, a focus group to discuss contraceptive behaviour among young married couples should be composed of members of one gender, because people sometimes hesitate to discuss such matters in groups composed of members of both genders. In fact, Merton et al. (1956, p.12) argued:

> ... the more socially and intellectually homogeneous the interview group, the more productive its reports.... Interviewees of widely differing social status often make comments or refer to experiences [that] are alien or meaningless to the rest.

Focus groups can be held in any meeting or conference room. Frequently, they are held in facilities that are equipped with one-way mirrors. Often, some modest buffet is served prior to the session, and coffee and soft drinks are available during the discussion. Sessions are recorded on audio or video cassettes depending on the needs of the researcher.

The researcher establishes the content of the focus group so that it serves the research objectives. The issues that are to be raised in the group are written into a topic outline guide (TOG). The TOG provides the moderator with a series of questions that can be used to stimulate the discussion. It ordinarily begins with the moderator's introducing himself or herself, describing the focus group technique, and calling attention to the recording devices. A little humour about the recording goes a long way toward breaking the ice. The recording device allows the moderator to concentrate on the discussion rather than on note-taking for reports to the client. It also promises fidelity to the attitudes, opinions, values, perspectives, and beliefs of the participants. Participants usually appreciate knowing that their opinions are being taken seriously.

The number of focus groups needed to satisfy the research objectives depends on what the objectives are. In general, researchers can forgo additional focus groups when they can accurately anticipate participants' reactions to questions and

have heard essentially the same comment three or four times in three or four focus groups. If the research objective involves comparisons (e.g., between men and women, young and old), more focus groups will be required, and fewer focus groups are needed if one is seeking to learn the language of the issues rather than specific opinions. Frequently, an issue can be resolved with two to four focus groups.

The moderator is charged with focusing the discussion on the topics contained in the TOG, which specifies the domains of attitudes, opinions, values, and behaviours upon which the discussion will focus. The initial content of the focus group, as well as the recruitment questionnaire, is designed to sensitize participants to the topics.

The moderator's job is to keep the discussion on the topic without imposing notions about how the discussion should proceed. The moderator usually does not participate in the discussion. and is doing the job successfully when discussion proceeds with a minimum of direction from the moderator. The best focus group is one in which the participants talk to each other, rather than to the moderator, about the topics.

Focus groups usually involve eight related stages; each stage influences and is influenced by the others; what occurs early in the research influences what happens later and vice versa. During the planning, the typical stages in a project using focus groups must be juxtaposed against one another such that the final product will serve its intended purpose. The order in which each stage typically occurs in the research is:

Stage 1: planning and budgeting
Stage 2: sampling
Stage 3: recruitment of participants
Stage 4: moderation
Stage 5: the topic outline guide
Stage 6: observation
Stage 7: analysis
Stage 8: interpretation and recommendations.

Planning and Budgeting

Planning involves establishing research objectives for the project and designing a study that will achieve those objectives. The finances and facilities must be arranged, and the procedures established.

Planning is crucial, as some features of focus group research are both difficult and expensive to change. For example, if the population to be sampled is redefined after recruitment, the procedures designed to obtain a representative sample from the original population will not be appropriate.

Focus group research provides opportunities for insight, enlightenment, and perspective. At the same time, it may mislead the investigator, who must separate real from unreal insight. Aristotle thought that he was insightful when he defined the elements of the universe as earth, fire, water, and air but chemists have shown how unreal those insights were.

Good researchers are constantly alert to the possibility of having been hoodwinked. *Coca Cola* decided to scrap a century-old soda formula because research had "proved" soda drinkers wanted a change. However, the company resurrected the formula in response to public outcry.

The point is that every research design simultaneously provides the opportunity for new knowledge and carries the risk of error. The wise researcher will design research such that the likelihood of obtaining new knowledge is maximized while the risk of error is minimized. Frequently, an optimal research design will contain a mix of methods.

Research is ordinarily motivated by a desire for information on a specific topic or a desire to evaluate policy alternatives. The studies frequently seek to explore the attitudes, beliefs, opinions, preferences, values, and behaviours of a target population. The topics that can be explored in focus group research are numerous and varied. For example, human sexuality researchers may wish to use focus groups to explore perceptions of sexual pleasure, fantasies surrounding sexual behaviour, views of contraceptive behaviours by adolescents, female proceptive activity, resolutions to unwanted pregnancy by married and single parents, knowledge of and steps taken to prevent STDs.

Sampling

One of the major purposes of focus group research is to allow the researcher to experience vicariously the participants' frustrations, satisfactions, fears, and rewards. The focus group is most effective at achieving this purpose when the participants are homogeneous and share definitions of the situation.

After the dimensions on which homogeneity is sought have been established, the researcher may then seek a representative sample within that homogeneous group.

A chemist can work with pure (or nearly pure) oxygen, hydrogen, and helium, but researchers in human sexuality do not share this luxury. When dealing with people, one can speak of only relative heterogeneity and homogeneity. Hence, sampling remains an issue in social research.

At the same time, the greater the homogeneity of the target population on the issue of concern, the less important sampling is to the success of the research. Researchers sampling for surveys frequently seek out heterogeneous target populations whereas those doing focus group research seek out homogeneous ones. Thus, sampling is less of a concern in focus group research than it is in survey research.

Nevertheless, sampling remains a major concern in focus group research. The sample needs to be representative within the homogeneous target population. A common way to accomplish this sampling objective is to interview a representative sample of respondents, administer a questionnaire that can be used to screen for the homogeneity desired and then invite respondents to participate in the focus group appropriate to their demographic and psychologic profile. There are theoretical and practical limits to establishing participant homogeneity in focus group research.

As an example, I have used Ottawa, Ontario, Canada, as the imaginary geographic target for a focus group discussion on sexual decision-making. A questionnaire was devised to screen participants with a variety of homogeneity criteria. These included multiple category variables (language: French and English; age: 18-24 and 25-34 years; and gender: female and male) as well as constants (marital status: single; and sexual activity within the past year).

The rationale for use of random-digit dialing for recruiting participants was cost-efficiency. Given the wide use of telephones in an industrialized society, this method results in a reasonably representative sample to be selected from the target population. There are, of course, biases built into such a sampling design, as there are biases built into any sampling design. However, the biases are relatively minor and the cost advantages major compared with other competing designs. In societies and subcultures where the use of phones does not approach universality, other sampling frames should be adopted.

For example, to study the transmission of AIDS in an area roughly four kilometres in diameter, which is not characterized by wealth, phones, or effective transportation, one could rely on a focus group, arranging to use a facility located in the centre of the area so that participants could walk to and from the focus group. The population could be sampled by being divided into sectors. Participants from each sector of the area would be screened and recruited.

Recruitment of Participants for Focus Groups

Recruiting involves inviting and encouraging individuals who fit desired criteria to participate in the focus group. Ordinarily, recruitment includes administering a questionnaire designed to ensure that individuals who qualify for the group are invited and those who do not qualify are not invited.

For the research project exploring sexual decision-making, respondents were asked whether they would participate in the focus group and, if so, were asked their name, address, and phone numbers at home and work so that a confirmation letter and call could be received.

A questionnaire was used to screen potential participants (Table 2), and each question had a purpose. Questions 1-4 and 8 were used to qualify the participants in terms of the categories specified by the sampling design. The interviewer continued to administer the questionnaire as long as a respondent's answers fit the desired criteria. When an answer did not fit a desired group the interviewer thanked the respondent and ended the conversation.

Questions 5-7 and 9-12 were designed to stimulate the respondents' thinking about issues that would be raised in the focus group. Thinking about the topic beforehand usually results in a lively, informative discussion.

At the same time, it is unwise to develop the topic of the focus group discussion in too great a detail during the screening because of the risk that the interviewer will discourage participation or alter opinions.

Those who conduct research on human subjects must deal with the question: Why is this person participating in this research project? Ordinarily, while the research topic is of major

importance to the researcher, it is of lesser importance to the participant. The researcher cannot assume that participants have sufficient interest to participate for purely altruistic motives, as he or she is likely to face high no-show rates and a biased sample of participants who are willing to spend their time and energy with no compensation other than the opportunity to participate in research.

The most common motivator is money; the researcher agrees to pay the participant a set amount in exchange for participation. There are, of course, other things of value that can be offered in exchange for participation in a focus group.

The incentive for focus groups takes on a market function. That is, one wishes to offer an incentive that will result in attendance by those who agree to attend. At the same time, one does not wish to waste money. If all of those who agree to participate actually show up, the incentive may be too high. On the other hand, if 12 participants are recruited and only eight show up, the incentive may be too low. As a general rule, a no-show rate of 10% is acceptable; a no-show rate of 30-40% is not.

Incentives can be set from the perspective of total cost: in the US two focus groups of 12 participants each normally costs $5,000. If the incentive were $20, the incentives for all 24 participants would total $480 (if everyone showed up). If the incentive were $25, the cost would be $25 X 24, or $600. For an additional $120 ($600-$480), one increases the chances that participants will show up, be attentive, contribute to the discussion. In my opinion, the modest cost for increasing the likelihood of successful focus groups is money well spent

Most researchers want participants to leave the focus group with a feeling of satisfaction at having participated. For some, the financial incentive is sufficient to accomplish this purpose. Many people feel enlightened by the discussion on topics of interest, although they gratefully accept the monetary incentive they give the impression afterward that they find an intrinsic value in the sessions as well.

Besides offering incentives, researchers usually send a letter of reminder to each participant 3-6 days before the group (Figure 1). Not only does a letter serve as a reminder it stimulates people to think about the issues to be raised.

Moderation

During the focus group, the researcher engages in first-hand, face-to-face interaction with the members of the focus group. The challenge for the moderator is to keep the discussion on the topic without imposing preconceived notions about how the discussion should proceed.

Frequently, a joke or two by the moderator relieves everyone's anxiety. For example, a moderator can say: "We have strategically hidden microphones around the room to record what you say ... beware, the room is bugged!" Such a comment is usually followed by an anxiety-reducing round of laughter.

The moderator can then follow the laughter with the comment: "Actually, the reason for the tapes is that I have a bad memory. When we finish this discussion, I am responsible for conveying your comments and inflections to the research team. Without the tapes, I will miss half of what you said." One could add: "In fact, my responsibility is to convey your comments, thoughts, and ideas to the sponsor with as much fidelity to your intent and meaning as I can. I pledge to you that I will do that to the best of my ability."

The moderator can then say: "Ordinarily, when you talk to policymakers, you can't or won't tell them exactly what is on your mind. This is a rare opportunity to talk to people who make policy decisions and they can't talk back." Such statements capitalize on the desire for the participants in a focus group to state their opinion and have it be taken seriously by policymakers.

Participants in a focus group are not professional researchers; hence, they do not know all the techniques, purposes, opportunities, risks, etc. of the research activity. However, they are not stupid. They justifiably believe that the research would not be conducted unless someone was going to get something out of it. They can guess who that someone is, even though the specific identity of the sponsor is not usually revealed during or after the focus group. Their guess is usually based on the topics discussed in the focus group. Moreover, some of what the participants say is tainted by their beliefs about who the sponsor is.

When a respected institution in a society is sponsoring the research, the option of revealing the sponsor's identity carries with it an opportunity and a risk. The opportunity is that this information will

increase participation – both attendance and activity within the group. The risk is that the discussion will bog down in the specifics of the operations of the sponsoring organization rather than the general, generic issues that the researcher is attempting to address.

In human sexuality research, the issues under discussion are often intensely personal and emotional. Consequently, the moderator should ensure that the participants feel comfortable in the setting. He or she should devote much time to introducing the topic in an accepting and nonthreatening way.

The topic outline guide should begin with topics that do not delve into personal and intimate aspects of life. This allows time to establish rapport before moving onto more personal issues. When a moderator poses relatively impersonal questions, the participants often show that they are ready to discuss more personal issues by moving the discussion to those issues.

The task of the moderator of the focus group is to direct the discussion so that the kinds of information obtained bear strongly on the topics of interest to the sponsor and, at the same time, are not polluted by artifacts that lead researchers down a blind alley. Alternatively stated, the purpose of the moderator is to separate the relevant comments from those that mislead the sponsor about the thoughts, behaviours, and comments of the participants. This is not an easy task. It does, however, drive at the heart of any investigation that seeks insight and information about the thoughts and actions of others.

On sensitive topics such as human sexuality, people often say things that blatantly contradict their behaviour. For example, participants may state that they intend to use condoms, but one cannot assume that they will do so.

Bellenger et al. (1976) stated that an effective moderator is kind, but firm; permissive, but not allowing chaos; involved, but not imposing; engaging of nonresponsive members, but not commanding; and flexible, but not wishy-washy. The general strategy followed by effective moderators is to begin with a wide definition of the domain of content under investigation and then to allow the participants to refine their definitions of the concepts over time. The refining may occur in a single group or it may occur from group to group.

A sponsor who desires to utilize focus groups faces the vexing task of selecting a productive moderator. There is a simple, usable, believable criterion to evaluate whether a focus group succeeds with its research objectives: in a productive group, participants will talk to each other about the issues on the moderator's TOG. In an unproductive group, participants will direct answers to the questions on the TOG to the moderator. As I have said elsewhere (Zeller 1987), "This criterion is as awesome as it is simple." No discussion will occur without some direction from the moderator; the key is to keep the discussion on topic while imposing a minimum of preconceived notions.

In a focus group conducted among single young adults, for example, a participant might say: "When I have sex with my boyfriend, I am going to take precautions. I'm not going to get into trouble." The moderator seeks to clarify this comment by asking: "What do you mean by 'getting into trouble'." This allows the participant to say: "I don't want to get pregnant," or "I don't want to get exposed to AIDS," or "I don't want to get the reputation of being promiscuous." Thus, the moderator has provided a context within which the meaning of the participant's comment has been clarified.

Topic Outline Guide (TOG)

TOG is the set of topics to be covered by the focus group. Its purpose is to act as a framework so that the information and insights obtained from the group will bear upon the research objectives.

The TOG provides an opportunity and a risk for the success of the focus group. The opportunity is that the topics relevant to the objectives of the research appear on the list and remind the moderator to channel discussion in those directions. Conversely, if a topic relevant to a major objective of the research does not appear on the TOG, the information and insight desired from the focus group probably won't emerge.

The analogy in psychology is operant conditioning. In operant conditioning, the experimenter waits for the experimental subject to behave in a certain way. After the desired behaviour has been emitted by the subject, the experimenter rewards the subject. The major problem with operant conditioning is that without guidance, the subject is very unlikely to behave in the way desired. Consequently, the experimenter may have to wait a

long time before invoking the reward and producing the operant conditioning.

The TOG moves from general concerns to specific ones, as the focus group tends to be most productive when the initial questions raise general issues (Figure 2). After these general issues are raised and participants begin to ponder, think, and interact on them, the moderator can nudge the discussion toward specific concerns.

The TOG must be carefully constructed to include the topics of interest to the sponsor and be flexible enough in content to accommodate the ebb and flow of focus groups. Imposition of direction eliminates one of the major advantages of focus group research.

In the ebb and flow of a focus group, the general pattern is:

- To introduce the moderator, the technique, and the participants, and establish an appropriate level of interpersonal rapport so that participants are willing to discuss their preferences and options;
- To initiate a general discussion of the topic;
- To focus on specific issues of the topic that are of primary concern to the sponsor; and
- To allow participants to voice any thoughts they have about the topic under discussion.

A TOG can be directed toward any appropriate research topic for which focus group information is pertinent. Frequently, the results of focus group discussions stray from the topics specified in the TOG. Wholesale rejection of the perspective of the sponsor presents an opportunity and a problem. The opportunity is that a perspective different from that of the sponsor becomes apparent. The problem is that if the members of the focus groups reject the premise of the sponsor entirely, attempts to identify specific dimensions of that premise become bootless.

Thus, the instruction received as a result of focus group discussions may change the nature of the questions being asked. Whereas the original research objective asked: "What is the nature of sexual decision-making?" a revised research question could be: "What strategies do people use to eliminate or reduce the likelihood of contracting STDs?"

A moderator must be sensitive to the reactions of the participants to questions posed on the TOG. Some questions are crucial to the research objectives and must be pursued despite participant resistance. Others are tangential to the research and can be altered. The moderator's judgment on this matter is important to the success of the focus group in meeting its research objective.

At the conclusion of the focus group, the moderator expresses appreciation for participation in the focus group, then promises to take the comments of the participants back to the sponsor with as much enthusiasm and fidelity to the intent expressed by the participants as possible. In short, the moderator makes it clear that the participants' comments will be provided to the sponsor in a serious and professional manner. The moderator then asks participants if they have any questions about the research and should be able to answer questions effectively.

Observation

Observation involves examining the behaviour of the participants in a research setting. The goal of observation is to separate useful, informative, insightful comments from misleading, biased, and trivial ones. The researcher observes members of a particular culture voicing their ideas concerning the topics of interest; indeed, one of the great strengths of focus group research is that they give researchers the opportunity to observe members of a target population talking about issues of importance to the research.

Focus groups are ordinarily audio-taped; occasionally they are also video-taped. The taping allows researchers to listen to (and see) the discussion on multiple occasions.

Participants are aware of these taping activities and may alter their behaviour accordingly. Moreover, the moderator has direct contact with the participants for the duration of the group. Thus, a major risk associated with this form of observation is that participants say and do things that they would not have said or done if they had not been in those particular circumstances, influenced by the research situation and the moderator's behaviour.

In focus group research, the researchers are "known" rather than disguised or hidden. The result is that participants know that the moderator is not "one of them." This structure allows the moderator to ask "naïve" questions and not be considered an incompetent fool.

Participants usually feel comfortable "instructing" the moderator about "the way things

are done around here." Moreover, when sensitive issues are raised, the moderator can make a faux pas, allow the participants to correct social blunders, and be instructed about what the norms of the group are by the nature and enthusiasm of the correction. In addition, the fact that the moderator is not a member of the culture of the participants in the focus group implies that the ethical problems of dishonesty associated with a disguised or hidden researcher are avoided.

Essentially, the moderator is treating the participants in the focus group as informants. The participants are informing the moderator on the attitudes, values, opinions, and behaviours of the members of the culture represented by the participants. Although much of the field work depends upon key informants, focus group research relies on informants who hold no special position within the culture.

Occasionally, a participant in a focus group will attempt to become a key informant by dominating the comments. One of the responsibilities of the moderator is to ensure that no individual intimidates others in the group. The moderator has a difficult task in controlling intrusive participants without intimidating other participants. Frequently, one can accomplish the task by posing compare and contrast questions: "Bob thinks that thus and so is the case. What do you think, George? Do you agree or disagree with Bob?" Or the moderator can say: "We hear Bob's position on this question. I would like to learn how some of the others feel about this issue."

The primary tool of observation in focus group research is listening. The effective listener is one who is constantly searching for what the speaker is intending to say. Ineffective listeners impose their own perspective on the participants' statements. Effective listening requires constant vigilance. The major rule is to ask: "What did the participant say?" then "What did the participant mean?"

The most common way that observers impose their perspective on what participants say is to identify the supposed meaning without serious consideration of what the participant said. The most common way to demonstrate that an attitude, opinion, value, or perspective is erroneously attributed to a participant is to state verbatim what the participant said.

Analysis

Analysis is the activity of manipulating the information gleaned from the discussion. The goal of analysis is to manipulate the data so that they most usefully address the objectives of the research. The most common analytic tool in focus group research is the transcription, preparation, and presentation of the comments of participants. In this analysis, the researcher listens to the tape-recording of the discussion, transcribing the comments in reaction to the questions posed by the moderator. Some researchers prepare verbatim transcripts; others use paraphrased comments. Each approach involves opportunities and risks. The opportunity of verbatim transcripts is that all the comments of each participant present themselves to the analyst. Thus, nothing is overlooked. The major risk of verbatim transcripts is that the analyst will be overwhelmed with the volume and lack of organization of comments. Thus, one of the risks of focus group research is that the major points get lost in a barrage of irrelevant comments.

The major opportunity of paraphrased comments is that the discussion can be organized, reordered, and focused so that it is most relevant to the research objectives. For important points, the researcher may quote directly from participants and for tangential issues, simply summarize the comments. The analyst exercises "reasonable judgment" about inclusion or exclusion of comments.

There is a practical reason for the exercise of this reasonable judgment in the transcription of focus group comments. Much of what is said in focus groups is patently irrelevant to the research objectives. Were it to be included verbatim, the analysis would be excessively and uninformatively complex. With reasonable care, the researcher can vet the material and remove the trivia. In addition, the researcher can reorder the comments so that the analysis is contiguous.

The major risk of paraphrased comments is that the exercise of "reasonable judgment" will, essentially, not be reasonable. The analyst has the capacity to alter not only the specific comments but also the meaning of a discussion. A decision between verbatim and paraphrased comments should weigh their opportunities against their risks.

Once the comments, verbatim or paraphrased, have been presented, the next step is to identify the major themes of the discussion. Ordinarily, fewer

than 10 major themes emerge for a focus group, frequently fewer than five. I have observed many focus groups where only one major theme emerged.

Moreover, some of the major themes are irrelevant to the objectives of the research. In the analysis, care must be taken to ensure that what appears to be irrelevant does not, in fact, shed light on a topic. Although opinions on a topic are relevant, so is the fact that participants do not know or do not care about a topic.

Moderators can seek clarification of comments made in a discussion, but when participants talk to each other about the topics on the outline guide, the moderator may decide not to interrupt the discussion. In these cases, comments can be made for which clarification is needed but is not forthcoming in the discussion. For example, if the moderator chose not to ask for clarification from a participant who said: "When I have sex with my boyfriend, I am going to take precautions. I'm not going to get into trouble." discussion analysts could search the surrounding comments for evidence of what "getting into trouble" meant. If no clarification is forthcoming, the analysts should resist the temptation to impute a particular meaning to the comment. The resolution to this generic problem is effective and attentive moderation.

Interpretation and Recommendations

Interpretation is drawing inferences from analyzed data. The goal of interpretation is to clarify how the analyzed data relates to the research objectives. Interpretation requires an understanding of the research objectives, an appreciation for the opportunities and risks associated with data from focus groups, the kinds of information that can be obtained from other research designs, and judgment.

Recommendations are statements from the researcher about desirable and undesirable courses of action for the sponsor, based on the researcher's understanding of both the sponsor's needs and the data. The goal of recommendations is to ensure policymakers understand the relevance of the research. Recommendations are the explicit statement of policies that are reasonable in light of the research.

Judgment is a formal utterance of an authoritative opinion. It represents the researcher's belief about the implications of the research for the sponsor. Neither objectivity nor value-free comment is desirable. The authoritativeness of the opinion is based upon a knowledge of how the research was structured, what was seen, and the analysis. The value-laden opinion is based upon a specific framework within which the research occurred. That framework implies a set of orientations and values. To the degree that the researcher is operating as a consultant in the interests of the sponsor, the researcher will provide an interpretation consistent with the subjective, value-laden framework within which the research occurred.

For example, I could be invited to conduct focus groups sponsored by an organization that sought the elimination of AIDS. Such focus groups would direct attention to a variety of issues concerning sexual activity, injections, drug use, knowledge of AIDS transmission, strategies for AIDS prevention, commitment to specific lifestyles, etc. I would be expected to recommend policies from the study about how to prevent the transmission of AIDS.

The recommendations would represent my judgment concerning optimal strategies for reducing AIDS spread. The recommendations would not be facts; however, they would be based on facts. The recommendations would be my interpretation of the facts in light of the values and purposes of the sponsor.

Every research method runs the risk of influencing what is being observed, and researchers attempt to minimize the risk by employing procedures that reduce the chances that bias will occur. Focus group research inevitably intrudes somewhat into the lives of the participants. They are recruited to come to a particular place at a particular time for the purpose of discussing a particular topic. Moreover, the research setting in general and the moderator's behaviour in particular can influence the behaviours of the participants.

The opportunity is to provide a setting within which the participants reveal accurate accounts of their attitudes, opinions, values, and behaviours. The risk is that the participants will present inaccurate accounts of their attitudes, opinions, values, and behaviours. Why would they present inaccurate accounts? More crudely, why do participants lie to moderators? Participants may present inaccurate information in focus groups for the same reasons that they do so in other social or research settings. People seek to obtain information about others with whom they are interacting so that they can

anticipate what the others will do, decide upon appropriate behaviour, etc. For example, the question "How are you?" evokes an answer that depends upon whether the questioner is a neighbour or one's physician. To a neighbour, one may reply "fine" despite a throbbing headache. The information is inaccurate, but the circumstances encourage the response. The neighbour probably does not want a full medical account – he or she is merely expressing a social courtesy in the form of a question.

The same social processes operate in focus groups as operate in everyday life, and the social context of a question may contribute to the answer. To encourage fidelity to the attitudes, values, opinions, and behaviours of the participants, moderators of focus groups generally follow some conventions:

- Establishing rapport with the participants;
- Explaining the research to the participants;
- Calming the participants' concerns about the unknown aspects of the research;
- Legitimizing socially undesirable responses; and
- Seeking out diversity of opinion.

There is no guarantee that these motifs of research will eliminate bias in the research, but researchers can remain sensitive to possible sources of bias in data and attempt to minimize it as much as possible. Researchers do not claim that focus groups do not suffer from bias. Indeed, the list of potential threats to the veracity of the information is long, complex, and serious.

The claim is that, despite potential biases, much valuable information is obtained using this method. Effective researchers have to be vigilant against threats to the validity of the research enterprise, but they can glean much in the way of insights and information from focus groups.

The focus group represents a useful, cost-effective, efficient, qualitative data gathering instrument designed to elicit information on the attitudes, opinions, values, beliefs and behaviours of participants. It deserves to be included in the array of techniques employed by social scientists in their quest for theoretically understandable and methodologically sound social principles.

Positivistic and Phenomenological Paradigms of Scientific Research

Quantitative and qualitative approaches to the study of human sexuality have emerged from alternative paradigms of science. The quantitative approach relies primarily on a positivistic paradigm; the qualitative approach relies primarily on a phenomenological paradigm. In my view, neither of these paradigms, taken in isolation from the other, produces a compelling epistemological basis for social knowledge. As Greer (1969, p.160) noted:

> The link between observation and formulation is one of the most difficult and crucial in the scientific enterprises. It is the process of interpreting our theory or, as some say, of "operationalizing our concepts." Our creations in the world of possibility must be fitted to the world of probability; in Kant's epigram, "Concepts without percepts are empty." It is also the process of relating our observations to theory; to finish the epigram, "Percepts without concepts are blind."

Two paradigms can be integrated. In the extreme, the positivistic paradigm of science operates solely upon observation. It focuses on the procedures by which scientific investigation is conducted. Positivists place a premium on complete specification of what was done to whom and how. The major positivistic goal is replication. Positivists work not with objects but rather with operational definitions of objects. Bridgman (1928) suggested that a concept is defined in terms of a set of operations. Within this paradigm, intelligence is defined as the score produced on an intelligence test. Though generalization in science depends upon the use of concepts, extreme positivism denies the existence of concepts in science.

Positivism presents an opportunity and a risk. The opportunity is the healthy reminder that ultimately, differences in theoretical persuasion must be settled by observation. The risk is that the unimaginative positivist collects data within a sterile framework. At best, this activity is unproductive; at worst, it is a barrier to discovery (Greer 1969, p.69-71).

In the extreme, the phenomenological paradigm of science operates solely within the realm of the actor's definition of the situation. It focuses on the perceptions of the actors. The major phenomenological goal is empathy, understanding the situation from the actor's perspective. Within this paradigm, one cannot "know" without having personally experienced. Inference in science depends

upon the capacity for multiple people to observe the same event; extreme phenomenology asserts that events do not exist independent of the perceptions that, by definition, cannot be observed by multiple individuals.

Phenomenology presents an opportunity and a risk. The opportunity is the healthy reminder that much social behaviour depends upon the definition of the situation provided by the actor. The risk is that generalization is trivialized by the phenomenologist's claim that nothing exists beyond the actor's perception and definition of the situation. Though science assumes the existence of a world beyond one's senses and knowledge beyond one's experience, extreme phenomenologists reject these assumptions.

The quantitative approach depends on the positivistic paradigm more than on the phenomenological; the qualitative approach to research depends more on the phenomenological paradigm than on the positivistic. Each paradigm simultaneously provides a crucial element in the quest for knowledge and threatens the quest when applied in the extreme, a prudent approach to the accumulation of knowledge employs both, each for its strength.

This discussion carries research design implications. First, quantitative techniques are primarily used for explanation, confirmation, and generalization; qualitative techniques are primarily used for exploration. Quantitative techniques can be used for exploration and qualitative techniques for explanation, confirmation, and generalization, but it is not usually cost-effective to do so.

I believe that in social research, a reliable and valid scientific investigation will seek both generalization/replication and definition of the situation. To contribute vibrantly to scientific knowledge, qualitative research must ultimately be quantifiable and researchers must be able to see quantitative research results qualitatively. Scientific validity is thus redefined to mean that a scientific generalization is compelling only when it is heard in conversation and seen in the numbers.

I also believe focus group research deserves special emphasis. This research method is an additional tool for researchers in human sexuality. Focus groups provide the opportunity to obtain, cost-effectively, insight into the attitudes, perspectives, values, opinions, and behaviours of populations.

Figure 1. Letter of Reminder to Individuals Who Have Agreed to Participate in a Focus Group on Sexual Decision-making.

May 21, 1989

Mary Generic
1234 Fifth Street
Ottawa, Ontario

Dear Mary:

Thank you for agreeing to attend the discussion group on social and sexual activities. If, for some reason, you need to cancel this participation or have any questions, please call me at 123-4567.

This discussion will be held at the Home Sweet Home Inn, Ottawa at _____ pm on _____ _, _____ 1989. It's fun and informative to share opinions on this important topic. We look forward to seeing you and other single women about your age at this activity.

We will be raising five questions at this discussion group:

- What makes a member of the opposite sex attractive to you?
- What do you do when you are interested in a member of the opposite sex?
- What does a member of the opposite sex do to indicate a sexual interest in you?
- How do you handle questions of contraception and sexual transmission of diseases with your sexual partners?
- Under what conditions would you engage in sexual behaviour with a member of the opposite sex?

This is your chance to share your views with one another on these topics. We look forward to a lively discussion on these and related questions.

Sincerely,

Sally Everyone, Ph.D.
Research Analyst

Figure 2. Topic Outline Guide (TOG) on Sexual Decision-making.

A. Introduction by moderator

1. Moderator's name.
2. Focus group technique, taping
3. Confidentiality of information – no names
4. Group participants introduce themselves
   a. Describe unusual recent social encounter

B. Scope of social activities

1. What kinds of social activities do you engage in?
2. Describe the best kind of social activity your can imagine.
3. Describe the most embarrassing social situations you have been in.

C. Heterosexual relationships when you are not involved in a relationship

1. What do you do when you are interested in a member of the opposite sex?
2. What does a member of the opposite sex do when he/she is interested in you?
3. Do casual acquaintances seek sexual activities with you? Under what circumstances?
4. Do you entertain such propositions?
5. Do you discuss contraception with this partner?
   a. Why or why not?
6. Do you discuss sexually transmitted diseases (STDs) with this partner?
   a. Why or why not?

D. Heterosexual relationships when you are involved in a relationship

1. What is the best thing about this relationship?
2. What is the worst thing about this relationship?
3. Does your boy/girlfriend want you to engage in sexual activities that make you uncomfortable?
4. Has your boy/girlfriend attempted to coerce you to engage in sexual activities?
5. Do you discuss contraception with this partner?
   a. Why or why not?
6. Do you discuss STDs with this partner?
   a. Why or why not?

E. Health concerns in heterosexual relationships

1. Do you have sex-related health concerns?
   a. If so, what are they?
2. Do you discuss sex-related health concerns with your sexual partner(s)?
   a. If no, why not?
   b. If yes,
      - What do you talk about?
      - When do you discuss these concerns?
      - Who initiates these discussions?
      - What is your purposes for engaging in these discussions?
      - Do you take measures to prevent transmission of STDs?
      - What steps?
      - Who is responsible for taking these steps?

F. Public agency reactions to STDs

1. Should public agencies take steps to counter the transmission of STDs
   a. What should they do?
2. Could public agencies do things to counter STDs that would infringe on your right to decide things for yourself?
   a. What?
   b. What should the limit of public agencies' activities concerning STDs be?

G. If you could sit down with the director of a public agency dedicated to the eradication of STDs, what would you tell him or her?

Table 1. Three Major Objectives for Research and the Best Methods to Accomplish Them.

Objective	Method
Causal inference	Classical experiment
Confirmation and Generalization	Quantitative methods (sample survey)
Exploration	Qualitative methods

Table 2. Screening Questionnaire for Participants in a Sexual Decision-making Focus Group.

(Establish language of respondent and speak in that language. TERMINATE if respondent's language is other than French or English.)

Hello. My name is _____. I am a member of a research team here at the XYZ Sexuality Research Centre in Ottawa. We are conducting a research study among residents of Ottawa on social and health related issues. Specifically, we are investigating the kinds of social relationships people establish and how people behave in this day and age.

1. Could we ask you a few questions?

   1 Yes - CONTINUE
   2 No - TERMINATE

2. Are you a resident of Ottawa?

   1 Yes - CONTINUE
   2 No - TERMINATE

3. What is your age?

   1 Under 18 - TERMINATE
   2 18-24 - CONTINUE
   3 25-34 - CONTINUE
   4 35 and older - TERMINATE

4. Are you single, married, widowed, divorced, or separated?

   1 Single - CONTINUE
   2 Married - TERMINATE
   3 Widowed - TERMINATE
   4 Divorced - TERMINATE
   5 Separated - TERMINATE

5. How often do you socialize with members of the opposite sex? - CONTINUE

   1 Less than once a week
   2 Once a week
   3 Twice a week
   4 Three or more times/week

6. What is the best thing about your social life? - CONTINUE

   _____

7. What is the worst thing about your social life? - CONTINUE

   _____

8. How many different people of the opposite sex have you had sexual intercourse with in the past year?

   1 1 - CONTINUE
   2 2 - CONTINUE
   3 3 or more - CONTINUE
   4 none - TERMINATE

9. Consider your most recent sexual partner. How long has it been since you have engaged in sexual intercourse with this partner? - CONTINUE

1 Within the past week
2 Within the past month
3 Within the past 6 months
4 6 to 12 months ago

10. On that occasion, did you use a contraceptive? - CONTINUE

1 Yes (What kind? _____)
2 No

11. Have you discussed contraception with that partner? - CONTINUE

1 Yes (Why? _____)
2 No (Why not? _____)

12. Have you discussed sexually transmitted diseases with this partner? - CONTINUE

1 Yes (Why? _____)
2 No (Why not? _____)

13. Based on your responses, you qualify to participate in a discussion group on social and sexual activities. This discussion will last about two hours and we will pay you $25 Cdn. for your time. This discussion will be held at the Home Sweet Home Inn, Ottawa at:

CHECK APPROPRIATE GROUP

____ 6:00 pm on Wednesday, May 31, 1989 (female, 18-24, French)
____ 8:00 pm on Wednesday, May 31, 1989 (male, 18-24, French)
____ 6:00 pm on Thursday, June 1, 1989 (female, 25-34, French)
____ 8:00 pm on Thursday, June 1, 1989 (male, 25-34, French)
____ 6:00 pm on Wednesday, June 6, 1989 (female, 18-24, English)
____ 8:00 pm on Wednesday, June 6, 1989 (male, 18-24, English)
____ 6:00 pm on Thursday, June 7, 1989 (female, 25-34, English)
____ 8:00 pm on Thursday, June 7, 1989 (male, 25-34, English)

The members of this discussion group will all be (women/men) aged (18-24/25-34). It's fun and informative to share opinions on this important topic. Can we count on your attendance?

1 Yes - CONTINUE
2 No - TERMINATE

(Repeat)

This discussion will be held at the Home Sweet Home Inn, Ottawa at _____. We'll see you there.

NAME _____ PHONE _____

ADDRESS _____

_____

The AIDS Epidemic: Quantitative Assessment in Human Sexuality Research

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Résumé en français. *L'épidémie du syndrome d'immunodéficience acquise (SIDA) a donné lieu à une intensification sans précédent de la recherche en sexualité humaine. Malheureusement, la méthodologie dans ce domaine ne s'est pas perfectionnée assez rapidement pour répondre aux demandes des projets sur le SIDA qui portent sur les couches de la population à risque élevé quant à la transmission du virus de l'immunodéficience humaine (VIH) notamment adolescents, homosexuels, toxicomanes, minorités ethniques et personnes subissant une transfusion.*

Au chapitre des populations étudiées, une part importante du travail méthodologique axé sur la recherche en sexualité portait sur des étudiants hétérosexuels de niveau collégial. Pour l'instant, très peu de données méthodologiques sont disponibles, sinon aucune, permettant d'orienter la recherche sur le comportement sexuel des nombreux groupes à risque élevé d'infection par le VIH. Les différences culturelles qui différencient les groupes à risque élevé au chapitre du langage sexuel et du désir de participer à la recherche sur le SIDA créent des obstacles dont l'ampleur exacte est inconnue dans le cadre des projets sur les comportements associés au SIDA. Quoi qu'il en soit, les travaux antérieurs donnent une idée de la direction dans laquelle poursuivre les études. De toute évidence, les gens ne sont pas tous enclins à divulguer des renseignements d'ordre sexuel. Cette observation fondamentale montre bien qu'il est capital de déterminer quelle influence les méthodes d'évaluation exercent sur le désir des gens de participer à des études sur la sexualité et, par conséquent, à répondre à des questions essentielles pour la recherche sur le SIDA.

En ce qui a trait à la réponse à la recherche, la documentation porte essentiellement sur les facteurs de tâche (à savoir type d'évaluation, format de la réponse, ordonnancement, présentation personnelle) même si aucune recherche ne s'est concentrée sur les facteurs qui altèrent la précision des évocations. Quelques travaux seulement traitent de l'influence de l'interviewer sur la recherche en sexualité. La situation est très troublante, car cette influence est déterminante quand les variables interviewer-répondant sont rattachées au sujet à l'étude (Sudman et Bradburn, 1974). En outre, aucun chercheur n'a examiné ce qui incitait le sujet à participer aux recherches en sexualité ou sur le SIDA.

L'épidémie de SIDA est survenue à un moment où nous étions incapables de répondre aux questions fondamentales sur le comportement sexuel de la population. Les efforts déployés pour combler cette lacune ne se sont pas toujours appuyés sur une méthodologie appropriée. Tout

compte fait, il faut rattraper le temps perdu. Une méthode rapide consisterait à veiller à ce que la plupart des études sur les comportements associés au SIDA, financées par le gouvernement fédéral, intègrent des variantes méthodologiques de la procédure suggérée. On doit en outre accorder la priorité à une diffusion rapide des résultats méthodologiques, en supprimant les retards habituels attribuables à la publication.

Overview

There is an unfortunate division between quantitative and qualitative methodologists in the social sciences. In the United States, quantitative methods have dominated the social sciences including human sexuality and AIDS behavioural research. However, some investigators have used both approaches, and they have influenced the philosophical direction of this paper. My position is that qualitative and quantitative methods are not distant cousins, rather they are intimate lovers – needing each other and capable of producing new growth.

This is not to say that the criticisms of qualitative and quantitative methods are not valid. Qualitative methodologists are probably accurate in saying that quantitative approaches can fail to provide an in-depth look at the context that surrounds a person's behaviour. The result is that quantitative research runs the risk of incorrectly identifying the causes of, for instance, sexual behaviours that transmit HIV (human immunodeficiency virus). Also, quantitative researchers rely heavily on formal theories of behaviour. This reliance restricts the number of phenomena that are measured to those specified by the theory. Thus, quantitative studies may fail to identify new phenomena.

Quantitative investigators, likewise, have valid criticisms of qualitative research. Qualitative investigators discuss the importance of not imposing one's implicit or explicit theories of human behaviour on what a respondent discloses; however, they often fail to give any criteria by which one could judge investigational objectivity. Further, qualitative data (e.g., verbatim transcripts of sometimes quite lengthy interviews) take a longer time to analyze than quantitative data; this is a problem when, as with the AIDS epidemic, answers are needed today.

Although the criticisms of both camps have validity, they fail to acknowledge the relationship between quantitative and qualitative methods within the research process (discovery, verification, generalization). Carefully constructed qualitative research (such as naturalistic observation; Willems and Alexander 1982) provides a valuable precursor to large-scale quantitative studies. When used in tandem to evaluate an intervention program, quantitative and qualitative methods often provide mutually clarifying data (Patton 1980).

The choice of methods is not simply an academic exercise, it is a critical concern in confronting the AIDS epidemic. Information is needed quickly, but one cannot sacrifice quality for speed. Indeed, the challenge of collecting highly sensitive sexual information within the complex emotional milieu of the AIDS epidemic is tremendous. Great care must be taken in matching the target population to the appropriate method for data collection and for measurement. The diversity of subcultures, age groups, and social classes involved in the AIDS epidemic requires careful examination of those methods being employed to collect sexual information. Unfortunately, few studies have examined the utility (reliability, validity) of different quantitative methods in assessing human sexual behaviour, thoughts, and feelings. As quantitative investigators sail these uncharted waters, they need to conduct qualitative and quantitative assessments of their data collection and measurement techniques. Side-stepping this developmental research phase is dangerous; methodological errors at the level of basic research can lead to considerable waste in time, money, and, ultimately, human life. Thus, the need to move quickly to prevent the further spread of HIV infection must be balanced against the need to find a valid match between method and respondent. At times, this may require abandoning quantitative approaches altogether. However, researchers have by no means exhausted their creative potential for generating new quantitative procedures for use with populations where current techniques have failed.

In this paper, I have discussed:

- The basic requirements, advantages, and problems of quantitative assessments;
- Fundamental issues surrounding quantitative measurement of sexual behaviours;
- Response bias in sex research;

- Data collection methods that may be used in conjunction with quantitative assessments and their relative merits based on comparative methodological studies;
- Volunteer bias in sex research, an issue not limited to quantitative studies but particularly damaging to large-scale quantitative studies, as it militates against generalizations from the findings; and
- Suggestions for conducting quantitative sex research and some current research needs.

Value and Uses of Quantitative Assessments

The primary uses of quantitative methods for AIDS behavioural (sex) research are:

- In large-scale epidemiological studies that serve to identify the prevalence of sexual behaviours that place people at risk for transmitting HIV or that protect against transmission (e.g., condom use);
- In large-scale studies that have the goal of identifying specific subpopulations that should be targeted for intervention;
- Large-scale verification and mapping of the psychologic, social and physiologic conditions that are suspected to influence sexual behaviour; and
- Evaluation of intervention programs targeted at specific subpopulations or communities (Catania, Kezeles and Coates 1990).

Timeliness is important in AIDS research if researchers are to assist in preventing the further spread of HIV. The advantage offered by quantitative measures is that they rapidly provide extensive amounts of information on large numbers of people and can be more rapidly coded and analyzed than qualitative data.

Quantitative studies, employing identical measures, carry a high degree of comparability. For example, different kinds of interventions within a particular subpopulation can be validly compared on an index of success common to both studies.

Quantitative measures also permit use of a wide range of statistical decision-making techniques. Statistical techniques are, however, not foolproof against the biases and distortions of the investigator; the old maxim remains: "garbage in, garbage out."

Quantitative studies allow large numbers of predictors to be assessed efficiently and investigators often feel it is necessary to reduce these to a manageable level when data analysis begins. However, researchers should resist the temptation of abdicating responsibility to computers for analyzing large sets of predictors. For example, the commonly used stepwise regression programs allow the computer to pick the key variables and assign them a value in a regression equation based on statistical criteria. Thus, the investigator is relieved of the responsibility of making decisions about the causal priority or relevance of the predictor variables to the dependent measure (Cohen and Cohen 1975). However, stepwise procedures, particularly when large numbers of predictors are being examined, result in severe capitalization on chance (Cohen and Cohen 1975).

Hierarchical regression (Cohen and Cohen 1975) is philosophically a better approach. In hierarchical regression, predictors are entered in a stepwise fashion, but the investigator decides the order of entry based on theoretical or model-based expectations. In brief, allowing machines to make our choices is easy but foolhardy when explanation of a phenomenon is the desired outcome.

Data collection for quantitative assessment is efficient so samples can be large, ultimately increasing the investigator's ability to generalize findings. Nevertheless, sampling techniques sometimes fail to obtain a true picture of the diversity of respondents within a subpopulation. For example, gay men outside "gay ghettos" and closeted homosexuals are difficult to sample efficiently through normal random sampling (household, random digit dial, mail). Difficulties in sampling "hard-to-reach" gay men can be overcome by shifting emphasis from sampling people to using settings as the sampling unit. If one can identify the settings in which "hard-to-reach" gay men negotiate their sexual liaisons, then sampling is simplified (though data collection may be difficult). Thus, in some cultures one might sample bath houses, tea rooms, parks, and particular bars. Similarly, sampling prostitutes may require random sampling of places that prostitutes frequent on a large scale (e.g., jail, STD clinics, birth control clinics, "red-light" hangouts), none of which would provide access to all social classes of prostitutes. For adolescents, schools and classes within schools may become the primary sampling units. Ethnographic, naturalistic observation, and behavioural mapping studies of the target community or population are a first step in describing settings for inclusion in a sampling

scheme.

The key lesson is that the sampling unit is not always the individual or couple, particularly in AIDS research. Social and environmental settings facilitate – or are associated with – individuals who engage in high-risk sexual behaviour. For instance, studies of the sexual behaviour of bar patrons might first categorize bars within a community along lines relevant to AIDS research (e.g., gay, straight, mixed) and then identify special characteristics of the patron flow over time (e.g., a month). Sampling on randomly selected weekdays and weekends of various months would provide an indication of the different crowds within the establishment. Mail-in questionnaires and on-site interviews, could then be used to collect data.

Fundamental Requirements

One question quantitative investigators face is what to measure. To address the question, they can conduct field observations, focus groups, or in-depth interviews with individuals representing the extremes and middle ground on some important dimension (see Zeller's paper, this volume; Patton 1980). Two reasons for doing this are:

- The tendency to assume that "people behave sexually fairly much as I do" and those who behave differently fit some vague stereotypes that never get challenged. Personal biases aside, researchers studying subpopulations for which there is little prior research may have best hunches and theory-derived hypotheses that lead them astray. Quantitative assessments do not leave much room for self-correction. With quantitative assessments, one defines what is important to assess ahead of time and measures just that.
- The lack of flexibility to probe a respondent's answer or to be sure the respondent understood the intent of the question. For example, a respondent recently reported on a questionnaire that she was frequently having anal intercourse. Although alternative phrases for anal intercourse were provided in the questionnaire, a postquestionnaire open-ended interview revealed that she thought anal intercourse was rear-entry vaginal intercourse. She just could not conceive of any other place to put a penis and, therefore, interpreted the questions in terms that were consistent with her sexual frame of reference. Clearly, quantitative methods depend on having an in-depth understanding of the language and sexual beliefs of the target group.

Qualitative studies of the questionnaire or interview are useful (Orne 1969). Obtaining participants' feedback clarifies the applicability of the questions to people's sex lives and indicates other aspects of people's sex lives not tapped by the measures.

In sum, in planning quantitative studies, two principles should be observed:

- If a paucity of data bear directly on the study population, well-designed qualitative studies are the first step to defining what needs study;
- If the constructs or behaviours to be studied are being measured quantitatively for the first time among the target population, then scale development should proceed from scratch. Typical research steps proceed in the following sequence: qualitative studies, initial scale development, scale refinement, reliability and validity studies.

Quantitative assessments of behaviour require respondents to count or average their behaviour over some time period. Measurement of attitudes and beliefs may involve some type of response scale (e.g., Likert-type scales) that requires the respondent to be able to evaluate greater or lesser degrees of some attribute (e.g., degree of danger, risk for infection, enjoyment of condoms). Such quantitative measures require basic mathematical skills and familiarity with scales (e.g., thermometers). Consequently, some minimal amount of education and ability to function cognitively at the level of formal operations are needed by respondents. In general, researchers can minimize the amount of counting a person must perform and can use response scales that are familiar or easy to learn (Bradburn and Sudman 1983). Careful pretesting will reveal if respondents have difficulty with the assessment and how much training might be needed. Out of reach are poorly educated respondents or individuals whose cognitive framework does not encompass the mathematical requirements of the assessment technique.

Assessing Predictors of Sexual Behaviour

Numerous measures of social, cognitive, and emotional antecedents of sexual behaviour have

been developed. Past issues of *The Journal of Sex Research* (Volume 29, 1984; Volume 22, 1986), and recent monographs (Davis et al. 1988) have been devoted to research on and compiling of sexuality-related measures (Green and Weiner 1980). This material is far too voluminous to review here. However, some general principles in constructing quantitative measures of psychosocial predictors of sexual behaviour deserve mention:

- Research the available literature, since someone may have already developed the measure, perhaps even used it with the population of interest and collected reliability and validity data within the last 5-10 years since measures are often historically bound by language and concept). If nothing turns up, start from scratch.
- Begin qualitative studies of representative respondents from the target population (i.e., sampling extreme and mid-ground cases within the target population).
- From the qualitative findings, organize conceptually the measures and construct test items (statements, questions) that reflect respondents' actual statements.
- Conduct repeated assessments of the sample items, adding or deleting items, and perform standard reliability and validity assessments of the items on samples representative of the target population (Carmine and Zeller 1979; Osterlind 1983; Knowles 1988).

Numerous quantitative measures are being developed to assess sexual knowledge, social support, social norms, attitudes and belief systems relevant to sexual behaviour within the context of the AIDS epidemic. We have compiled and are updating a compendium of measures being used at the Centre for AIDS Prevention Studies and follow from the AIDS Risk Reduction Model (Catania et al. 1990). This is available upon request. The US National Institute of Mental Health working group on psychosexual assessment (Heino Meyer-Bahlburg, Columbia University, chairperson) is also compiling catalogues of sexuality-related measures (behaviour and predictors) that are being used in the four US AIDS research centres. These may be made available sometime in 1990 and will include reliability and validity data for measures employed with intravenous drug users (IVDUs), gay men, prostitutes, heterosexuals, adults, adolescents, and different ethnic groups. In addition, David Ostrow and Michael Trangott of the University of Michigan's AIDS research centre (Ann Arbor, Michigan) are producing a computerized filing system that will allow users to extract all items being used to measure a particular concept or behaviour across an extensive sampling of AIDS-related studies in the US. These resources will undoubtedly be helpful to many investigators. However, they will also undoubtedly fall short of addressing the needs of investigators in non-Western and non-English speaking cultures.

Quantitative Assessment of Sexual Behaviour

Assessments of recent sexual behaviour typically involve asking respondents how often they have performed a specific sexual activity during some given time (e.g., the past month, six months, or year). This type of measure can be used during data collection of any sort, but it does not assess current behaviour. Diaries are a more useful means for obtaining data on current levels of sexual behaviour and are less contaminated by memory distortion (see section on response bias). Assessing sexual behaviour in the remote past (defined here as anything between birth and the past year) may require a more complicated approach. The use of time lines or life-event calendars that help the person place their sexual histories in the context of their lives are often recommended and thought to be superior to simple frequency assessments. For instance, asking respondents to list significant life events, reflecting sexual and social development, illnesses, military duty etc., such as when was the first time you had sexual intercourse; when did you first have a steady sexual partner (dating, engagement); if married, what was sex life like during the first few years of marriage, later years, and so on; if divorced, what was your sex life like when you separated, after being divorced. Questions concerning with whom respondents had sex, how many partners, and details of their sexual encounters are then focused on each salient life-event and the intervals between events. Determining which events are salient for respondents requires some initial open ended questioning.

John Gagnon and the National Opinion Research Center at Chicago are currently using life-event calendars to assess sexual behaviour among adults. Richard Udry (University of North Carolina at Chapel Hill) is employing life-event

charts to assess sexual activity among adolescents. Anke Erhardt at the New York NIMH-NIDA AIDS research centre (Columbia University) is also using time-lines with a variety of different populations. A difficulty with the time-line/life-event approach is the extensive probing needed to obtain a listing of major life-events for each person – probing that takes interviewer resources. In addition, these assessments have not been compared with simple retrospective reports of frequency of activities.

Private Affairs, Self-report and Validity

The private nature of human sexuality restricts the types of measures one can employ. Since direct observation of sociosexual behaviour and the conditions under which it occurs is often impractical, investigators typically rely on self-reports. Laboratory studies have made direct assessments of sexual behaviour (e.g., erectile function, Farkas et al. 1978), but the range of activities that can be examined in the lab is limited. Clearly, researchers need to develop unobtrusive techniques for validating self-reported sexual activity.

Only one study has attempted to validate self-reported sexual behaviour. Udry and Morris (1967) obtained daily reports of sexual behaviour and urine samples from 15 blue-collar women. They told participants that they were studying human hormones and that they were asking questions about sexual behaviour because sexual arousal changed the hormones they were interested in measuring. Thus, some effort was made to camouflage the fact that respondents' sexual behaviour and not hormones was the focus of the study. Presence of sperm in the urine confirmed that the women had recently engaged in vaginal intercourse. Of the 15 respondents, 12 showed perfect concordance between their self-reports and detection of sperm in their urine, suggesting that these women were accurately reporting their sexual behaviour.

Unfortunately, Udry and Morris' procedures can neither verify frequency reports of vaginal intercourse nor validate other forms of sexual behaviour (anal and oral intercourse, masturbation). Moreover, how successful the investigators were in hiding the real purpose of the study is not clear. If respondents thought their sexual behaviour would be reflected by their hormone levels, then they may have been more motivated than normal to be truthful. Clark and Tiffit (1966) found, depending on the sexual behaviour assessed, between 5% and 30% of respondents changed their answers after learning that false answers might be detected by a polygraph test.

In summary, since sex research must rely on individuals' self-reports, it is important to learn whether these reports are valid. There may be little reason to doubt the validity of "yes-no" responses of well-motivated respondents, but the accuracy of reported frequencies of sexual behaviour is unknown. Since frequency of sexual behaviour is of great import to AIDS investigators, questions about the validity of self-reporting place researchers in an uncomfortable position. Some reassurance can be had from Winklestein and colleagues' (1987) recent longitudinal study that obtained blood samples and self-reported sexual behaviour. They found that decreases in self-reported high-risk sex among gay men paralleled decreases in HIV transmission over time. Risk indices based on self-reported sexual behaviours and sociosexual conditions have also been found to predict HIV seroconversion over time (David Ostrom, personal communication, May 1989). Such findings enhance confidence in self-reports.

Response Bias

Overview

Recognition of HIV as a sexually transmitted disease has led to a rapid increase in research on human sexual behaviour (see for review of US studies, Becker and Joseph 1988; Catania et al. in press; Coates et al. in press). Unfortunately, this research continues to be plagued by the unresolved problems associated with volunteer and response bias (systematic error) in sexuality studies (e.g., Green and Weiner, 1980; Catania et al., 1986; Morokoff 1986), problems that may have serious consequences for policy and planning. Methods that, for example, increase underreporting of high-risk sexual behaviours may hamper efforts to assess accurately their prevalence and distribution in various segments of the population. Thus, groups that should be targeted for prevention may be overlooked.

The present section reviews literature on response bias in studies of human sexual behaviour with attention to the problems of gathering sexual information in the context of AIDS. We examine

literature on nonresponse rates and test-retest reliability in sex research and address how these are influenced by task and interviewer variables and respondent motivation (Sudman and Bradburn 1974).

Prior methodological research has examined few sexual behaviours other than vaginal intercourse and masturbation (for design and sample details see Table 1). This is a serious limitation because many of the sexual activities of major interest to AIDS investigators are not represented (e.g., numbers of sexual partners; anal, vaginal, and oral intercourse; condom use; mutual masturbation; use of sex toys).

Furthermore, comparisons of nonresponse rates across studies are hampered because some investigators assess frequency reports whereas others examine only whether the behaviour has ever been performed. In several studies, nonresponse rates have been aggregated across behaviours (e.g., DeLamater 1974; Catania et al. 1986). This is problematic because it cannot be assumed that all sexual behaviours are equally threatening and, therefore subject to the same level of response bias. For instance, heterosexuals may have difficulty acknowledging that they engage in anal intercourse, but little problem with admitting to vaginal intercourse (Bolling and Voeller 1987). Averaging nonresponse rates across sexual behaviours may obscure the magnitude of the response bias for specific and, perhaps, critical AIDS-relevant activities.

Nonresponse Rates and Nonresponders

When respondents refuse to answer a question or deny a behaviour actually performed we label this a nonresponse. Nonresponses, as mentioned previously, will bias estimates of the prevalence of high-risk sexual behaviours in a population and hinder efforts to define characteristics of high-risk people. Because knowledge of the characteristics of those performing high-risk behaviours enables efficient targeting of intervention programs, it is clear that high nonresponse rates may have negative impact on primary prevention efforts.

Nonresponse rates on adult samples of self-administered questionnaires (SAQ) range from six to 13% for items assessing the frequency of vaginal intercourse and 6.7 to 19% for masturbation items (Bradburn et al. 1978; Catania et al. 1986; Johnson and DeLamater 1976). Nonresponders in sex surveys have been characterized as being older, less educated, and having lower reading ability (Johnson and DeLamater 1976; for young adults). Catania et al. (1986) found nonresponders to be less sexually experienced (fewer partners) and to have read fewer sexual materials (books, magazines, etc.) than responders. Because Catania et al.'s respondents were college students, the reading materials outcome probably does not reflect reading ability so much as the sexual content of that material. Thus, it appears that nonresponders have less sexual experience (directly or vicariously) and, therefore, may be sexually more inhibited than responders (see Self-presentation section).

Test-Retest Reliability

Test-retest correlations may be influenced both by nonresponse bias and by memory difficulties (and random error). At present, there has not been an effort to disentangle these different negative influences on test-retest correlations. Few studies have examined test-retest correlations for sexual behaviour questions, but those studies that have reported test-retest correlations have investigated a wider range of behaviours than those examined with respect to nonresponse bias.

Rodgers (1982) examined the consistency of adolescents' responses (yes/no) to questions about intercourse and masturbation that were asked at two points in a questionnaire. The reliability coefficient for reported intercourse was moderately high (0.81). For the total sample, inconsistent responses were relatively low (intercourse, 7.8%; masturbation, 8.3%). black males, however, gave more inconsistent answers (13% for intercourse and 26% for masturbation). Because minority teenagers are a concern of AIDS prevention efforts (Goldsmith 1988), Rodgers' data point out the need for improving the quality of data being collected from black adolescent male respondents. In our ongoing study of sexually active adolescent women (Catania, Coates, Greenblatt et al. 1989; Catania, Gibson, Marin et al. 1990), we examined test-retest correlations for reports of the frequency of vaginal intercourse and condom use over the previous two months. As with Rodgers (1982) we obtained responses to questions asked at two different points in a SAQ. That is, one set of questions appeared early in the questionnaire and a second set appeared toward the end of the questionnaire (measures

separated by 50 items).

The first assessment was a global measure (across sexual partners; two items) and the second asked for separate estimates of protected and unprotected vaginal intercourse for primary and secondary (aggregated) partners (four items). The reliability coefficient for frequency of total intercourse (unprotected and protected intercourse across partners) was very high (r=0.98), although the global measures produced a slightly lower mean count (global M=17.3, Multiple item M=18.5, t(62)=-2.06, p=0.04). The coefficient for condom use was also high (r=0.97) and mean values did not differ between times of assessment.

Last, we found the test-retest coefficients to decline slightly for those with three or more partners (r=0.92) versus those with only one sexual partner (r=0.99). Overall, our results suggest that sexually active adolescent women can provide highly reliable estimates of the frequency of vaginal intercourse and condom use for retrospective periods of two months, although the reliability may decline slightly when estimates involve multiple partners.

Saltzman et al's. (1988) test-retest data from adult gay men raise concerns about the stability of self-reported sexual behaviour. Test-retest coefficients on the frequency of condom use during insertive anal intercourse, frequency of receptive anal intercourse, and numbers of partners in the previous six months in their study were relatively low (0.50 to 0.56; Kappa statistic), as compared to coefficients for number of life time partners (0.70) and level of education (0.91).

These results are difficult to interpret because the test-retest interval varied from two to 18 months and the retest sample was composed only of men willing to return for their HIV antibody test results. Coates et al. (1986) also examined test-retest values for reported sexual behaviour by gay men (n=26). The interviews were three days apart. The results were mixed. Although some behaviours showed high test-retest correlations their mean values shifted considerably from time one to two (e.g., total number of partners since 1978; r=-0.98, time one M=450, time two mean=512).

Test-retest coefficients for various oral sex behaviours ranged from 0.40 to 0.88, anal intercourse 0.74 to 0.90, and miscellaneous anal activities (e.g., fisting, fingering) 0.50 to 0.99. The wide range in values suggests we need to take a careful look at the particulars of reporting each specific sexual behaviour and not assume that reliability of one sexual activity necessarily confers reliability on other sexual behaviours.

Catania (Catania, Gibson, Marin et al. 1990; Catania, Gibson, Chitwood and Coates, in press) examined test-retest data for heterosexual college undergraduates on items assessing the frequency of vaginal intercourse for varying retrospective periods (SAQ; assessment separated by two weeks). Results indicated that longer retrospective intervals are associated with lower test-retest reliability (1 month=0.89, 6 months=0.65, and 1 year=0.36).

Andersen and Broffitt (1988) examined test-retest correlations for factors derived from the Sexual Experience Scale that assesses if people have performed (yes or no) a lengthy list of sexual activities (ever, past two months). The number of behaviours endorsed are summed to produce a score. The authors then factor analyzed these scores and derived five scales (e.g., anal sex, masturbation). Test-retest on each scale was good (0.85) to poor (0.55) over time intervals of 4, 8 and 12 months. These data are problematic because reports of aggregated behaviours (i.e., summing together all types of anal stimulation) are examined not individual behaviours (e.g., insertive anal intercourse).

The problem is that behaviours practiced quite infrequently are likely mixed with behaviours performed on a regular basis. As we will discuss later, infrequently performed activities may have more reporting error, in some cases, than frequently performed behaviours. The consequence is that by mixing behaviours one is mixing items with both high and low levels of reliability. Thus, the interpretation of the resulting correlation is obscured except as an "average" of the different reliabilities of some set of behaviours, and it is not clear how such an average correlation may be useful in judging the merit of questions focusing on specific sexual activities.

It is difficult to arrive at conclusions based on the existing test-retest data. The teen data may be biased in that inconsistencies may be lower for yes/no responses than for frequency responses. Test-retest data collected in the same as opposed to different time frames, may lead to greater consistency. Saltzman et al.'s data on gay men may underestimate the true reliability scores given the large variability in the test-retest interval. Catania's

heterosexual data may not be generalizable to noncollege populations or assessments of noncoital sexual behaviours. Given the importance of achieving reliable behavioural reports, it is paramount that investigators begin systematically obtaining test-retest data on sexual behaviour questions for different data collection methods and reporting periods.

Interpartner Correlations

A number of studies have examined correlations between partners' reports of the frequency of their sexual activity (Jacobson and Moore 1981; Clark and Wallin 1964; Levinger 1966; Coates et al. 1988). These correlations have been interpreted both as reliability coefficients (e.g., Clark and Wallin 1964) and as tests of the validity of self-reported sexual behaviour (e.g., Coates et al. 1988). As a test of validity, such correlations are pure nonsense. As an example of the futility of this approach for assessing validity, consider two people both wearing watches; we ask them what time it is and they both give us the same time. What does this mean? Either they both set their watches incorrectly, in which case they have both reported the incorrect time or, they set their watches correctly and gave us the right time. Obviously, we cannot determine if they gave us the correct or incorrect time by simply asking them what time it is and comparing their answers.

As a measure of test-retest reliability, it is also inadequate because stability of the individuals response over time is the issue in test-retest reliability not the relative values reported by independent observers (i.e., sexual partners). So what are these inter-partner correlations good for? In my view, they are good for understanding conditions within the couple's sexual relationship (see "Some things you would rather forget"). That is, when couples have a large discrepancy in their reports of the frequency or quality of their sexual activity, there probably is some kind of problem (e.g., communication problems) at work in their sex life (whether the couple recognize it yet or not). Interpartner correlations should not be understood to imply evidence for validity or test-retest reliability of sexual behaviour.

Factors Influencing Response Bias

Overview

The ability to minimize response bias is dependent upon having an adequate understanding of three factors: task variables, the task being one of giving and obtaining information; interviewer variables, of particular relevance when the task reflects the social relationships involved in the interview; and respondent motivation (Sudman and Bradburn 1974). Although these factors have been examined extensively (Sudman and Bradburn 1974; Bradburn et al. 1978; Sudman and Bradburn 1983), very little of this research has focused on the assessment of sexual behaviour. The majority of the research on response bias in sex research concerns task factors, much less of it examines interviewer variables, and no one has directly addressed the issue of respondent motivation.

Task Factors

Task variables include task structure (e.g., type of assessment, SAQ versus face-to-face interview (FTFI), response formats, question type), features of self-presentation (e.g., the degree to which the content of questions elicit threat or approval seeking), and behavioural recall. Recall of behavioural data is influenced by the vividness and complexity of the behaviour, and emotions associated with the behaviour (Sudman and Bradburn 1974).

Vividness and Complexity

Although most of us can clearly remember our first sociosexual experience, probably few can recount what happened on the one-hundred-and-first sexual encounter. As this observation suggests, salience may be an important influence on recall of sexual experiences. How salient are our day-to-day sexual experiences?

The test-retest data underscore the difficulties people have in reliably estimating how often they have performed vaginal intercourse over time intervals of six months or more. Are these difficulties influenced by how we ask the question(s)? This issue has not been empirically addressed in the sex literature. For instance, it has not been established whether it is better to have

respondents recall their more recent sexual experiences first and then work backward or for them to begin at the beginning. Moreover, it is uncertain whether people have similar recall difficulties with all sexual activities. One hypothesis is that less-frequent sexual acts may be estimated more accurately because they stand out as unique against the background of one's modal sexual behaviour. Although this hypothesis is interesting, it belies the difficulty involved in recalling the multiplicity of sexual behaviours performed during one sexual encounter, let alone the diversity of behaviours occurring across sexual partners.

The person who has had only one sexual partner, and performs only vaginal intercourse on a regular basis of one or two times per week may produce very accurate behavioural estimates. Thus, a more limited sexual repertoire and partner history, and more routinized sexual encounters, might be associated with more accurate behavioural reports for some interval of time. However, the people of major concern to AIDS investigators are seldom monogamous and have more varied sexual practices. Some gay men, for instance, report hundreds of sexual contacts per year. Expecting that respondents will be able to estimate accurately the types and number of sexual behaviours performed with more than 100 partners is probably unrealistic. Further, problems in recalling past sexual activities may be compounded when sexual behaviour is irregularly clustered (e.g., constrained to some but not all weekends or vacations). Sporadic behaviours are not easily estimated and may require more cues for accurate recall (Bradburn et al. 1987).

Guesstimating Formulas

How do respondents compute their behavioural estimates? As Bradburn et al. (1987) point out, simple retrieval problems may not be at the heart of bias in answering quantitative questions. As the length of the reference period or the frequency of occurrence increases, more respondents rely on inferential methods of computing answers (Bradburn et al. 1987). In general, two broad strategies have been observed.

The first, decomposing, occurs when respondents derive a rate of occurrence for a given time period and then multiply that rate to arrive at some total figure for a larger period of time (Bradburn et al. 1987). With respect to sexual behaviour, we might ask how respondents arrive at their initial rate estimates. Do they select a rate from a recent period of sexual activity (recency effect) or do they pick what they feel is the most representative rate over some longer period? These contrasting approaches may yield very different answers from people who differ little in their actual behaviour. At present, there are no published data on these issues with respect to sexual behaviour.

A second inferential approach relies on what has been termed the availability heuristic (Bradburn et al. 1987). That is, the more easily one can recall an event or events (i.e., that the event occurred as opposed to when it happened), the more recent those events appear to be. Thus, events that have greater ease of recall and which occurred outside the reporting period will often be erroneously included in the response. In terms of sexual behaviour, this approach would manifest itself in terms of higher frequency values from people who can more easily recall larger numbers of their sexual encounters. This recall procedure is biased to the extent that events occurring outside the time frame of the question are included.

Other inferential strategies have been identified (Bradburn et al. 1987). For example, sometimes people report interpolating between largest and smallest values. That is, in estimating frequency of intercourse over the last five years I might take the lowest years estimate and the highest years estimate and pick a value about midway between to represent my activity over the past five years. In general, sex researchers have not examined how respondents calculate their number of sexual partners, and compute behavioural frequencies across partners for particular periods of time. It is essential that we have an understanding of these processes, particularly in terms of the biases different "guesstimating" methods have on reports of various types of sexual behaviour.

Some Things You Would Rather Forget

Emotions have been found to effect reports of sexual behaviour. Sexual distress has been found to produce differences in married partners' reports of their sexual behaviour (Jacobson and Moore 1981; Levinger 1966; Clark and Wallin 1964). In general, within the same marital dyad, sexually satisfied partners report higher levels of activity than unsatisfied partners (Clark and Wallin 1964;

Levinger 1966). This suggests that negative or positive sexual feelings may bias reports by colouring the person's recall of specific sexual episodes. For instance, sexually distressed people may not wish to recall sexual encounters that were painful or distressing. The extent of over or underreporting of sexual behaviour produced by emotional states at the time of interview or that are elicited by the questions needs to be investigated.

Order Effects

Conventional wisdom holds that question sensitivity should increase progressively across items; subjects are then gradually desensitized to more intimate items. Sensitive items presented too early may lead to greater response bias (Bradburn and Sudman 1983). However, fatigue may prove problematic for items occurring at the end of an interview. Finding the right balance between interview length and order requires considerable pretesting where the focus is on respondents' perceptions of the task as much as their actual responses to questions (see Orne 1969).

Conventional wisdom notwithstanding, earlier studies have failed to find order effects for sexual questions in either SAQ (Catania et al. 1986) or FTFI (DeLamater 1974; DeLamater and MacCorquodale 1975). However, respondents in those studies (college students, young adults) may have been less inhibited by sexual questions and, correspondingly, less susceptible to order effects than other segments of the adult population (Catania et al. 1986). That is, respondents who are less inhibited at the beginning of an interview will not be further desensitized by variations in task variables.

Identifying when order effects are likely to occur may, in part, require an appreciation of the psychosocial context surrounding specific sexual behaviours. For instance, young adults (20s) may find it very difficult in our culture to admit to being virgins. Teenagers, on the other hand, may be more wary of revealing nonvirgin status, particularly to an adult. Pre-AIDS, gay men may have readily admitted to having unprotected anal intercourse, but may be more reticent to report such now. Heterosexuals may feel uncomfortable with reporting anal sexual activity (Bolling and Voeller 1987).

These various scenarios suggest that sexual behaviours may vary in their degree of social desirability depending on what it means for the respondent to reveal performance of that activity. Although this issue will be discussed again in relation to self-presentation bias, contextual issues also have important implications for order effects. That is, the sequencing of questions may influence the social context of the behaviour.

Appropriate sequencing may reassure the respondent that it is acceptable, under interview conditions, to admit to socially undesirable activities. Johnson (1970), for example, found that married couples reported higher levels of extramarital coitus when the behavioural items were preceded by an "attitudes toward extramarital coitus" battery than with the reverse order. The attitudinal items communicated a nonjudgmental view on extramarital sex (Johnson 1970).

Johnson's results illustrate the importance of understanding the context surrounding the question for the respondent. Understanding these contextual issues is central to building respondent trust by providing evidence to the respondent that they will not be judged for reporting "deviant" behaviours. Beginning questionnaires with items that reflect a nonjudgmental view of the target behaviours, as Johnson did, may enhance trust. Another approach is to word behavioural questions so that all possible variants are nonjudgmentally presented (Bradburn and Sudman 1983). For example,

> Some gay men have begun using condoms during anal intercourse to avoid AIDS, while others are still undecided about using condoms, and still others have tried condoms, but don't always feel the need to use them. Would you say that you, never use condoms, sometimes use condoms or always use condoms? (For those answering sometimes or always, the frequency of condom use is then asked.)

In a sense, the question that covers all bases may perform the same threat-reducing function as would a large battery of attitude items. This hypothesis needs to be empirically tested.

Type of Assessment

AIDS investigators have been using a variety of assessment methods to gather sexual information (FTFI, SAQ, combinations of FTFI and SAQ; phone interviews). How do these different assessment methods influence response bias? Moreover, do respondents differ in their response to different methods? Investigators have only begun to

address the fundamental issue of threat associated with particular assessment approaches and are some distance from determining which methods work best with what kind of respondent.

Self-administered questionnaires may be less threatening than FTFI when asking sexual questions (Catania et al. 1986). Indeed, people willing to complete SAQ, but unwilling to volunteer for FTFI, are significantly less sexually self-disclosing than those willing to do both (Catania et al. 1986). Millstein and Irwin (1983) compared SAQ, computer-assisted SAQ (CASAQ), and FTFI for adolescent female respondents. Participants more often reported vaginal intercourse and masturbation on SAQ (74%, 38%) than in FTFI (63%, 25%). CASAQ produced results similar to those obtained by SAQ, further suggesting that enhancing respondents' privacy will reduce social embarrassment and increase honest reporting.

SAQ, however, do not always result in higher levels of reporting. DeLamater and MacCorquodale (1975) found that young adult women were less likely to report vaginal intercourse on SAQ than in FTFI, although it was not apparent why this result was obtained. Other approaches for reducing embarrassment, such as the random response technique, have failed to produce higher levels of reporting vaginal intercourse than FTFI (Zelnik et al. 1981). Nevertheless, SAQ are still a more cost-effective method than FTFI, although SAQ require basic reading skills and do not allow probes for clarifying responses.

Terminology. A complex problem for asking sex questions is in selecting workable terminology for different sexual behaviours. The diversity and changing nature of sexual language may at times place the investigator in the position of second-guessing respondents. Findings supporting the relevance of these issues indicate that familiar wording, selected by respondents, decreases response bias (Blair et al. 1977; Sudman and Bradburn 1983). This is particularly true for socially undesirable behaviours (Blair et al. 1977; Bradburn and Sudman 1979). Pilot testing that focuses on respondents' understanding of sexual terms is useful for developing alternative language. With SAQ, these terms can be built into definition sheets and administered with the questionnaire.

Question Structure. Blair et al. (1977) and Bradburn et al. (1978) have intensively examined SAQ with respect to wording, length of question, and response formats. They found that longer questions with open response formats lead to higher reports of vaginal intercourse (90/year) than short questions with closed response formats (72/year). The interested reader should consult Blair et al. (1977) and Bradburn and Sudman (1983) for general rules on asking sensitive questions.

In general, great care needs to go into the construction of SAQ assessing sexual behaviour. More extensive pilot testing may be needed for SAQ than with FTFI. It is unfortunate that variants on these methods, diaries, and phone interviews have not been systematically compared in studies of sexual behaviour.

Phone interviews have been employed in a number of recent AIDS investigations with adolescents and adults (Strunin and Hingson 1987; Levy and Albrecht 1989) (see for review Catania, Coates, Kegeles, Ekstrand et al. 1989). Random digit, dial phone surveys are a rapid, efficient, cost-effective, and rigorous way to collect sensitive information (Coombs and Feedman 1964; Hochstim 1967; Kegeles et al. 1969; Bradburn and Rogers 1976; Klecka and Tuchfarber 1978; Sudman 1979) and work well with young and older people (Strunin and Hingson 1987; Levy and Albrecht 1989). The types of response bias that occur in phone interviews of sexual material and degree of bias relative to other data collection methods are unknown.

Self-Presentation

Are sexual questions threatening and does this threat increase nonresponse? Several studies suggest that discomfort with disclosing sexual information is responsible for people's refusal to answer sexual questions. With respect to vaginal intercourse items, Bradburn et al. (1978) found that those who rated themselves as very uneasy about sexual questions were more likely to be nonresponders (9%) compared to those who felt very comfortable with sexual questions (2%). Similarly, Catania et al. (1986) found the total number of nonresponses to correlate significantly with self-reported willingness to disclose sexual information. Clark and Tiffit (1966) examined whether respondents would change their answers to sexual questions when confronted

with circumstances participants believed would detect falsehoods (polygraph test).

For intercourse, the percentage over and underreporting were nearly equal (15 and 17.5%, respectively). For homosexual contacts, only 5% of respondents overreported, but 15% underreported. Thus, homosexual behaviour, at least in 1966, was more likely to be under than overreported. Although based on a small sample, Clark and Tiffit's results highlight the need for estimates of how often homosexual behaviour is underreported. These data are critical for making accurate projections of the AIDS epidemic among gay and bisexual men.

Heterosexuals may have considerable difficulty in reporting anal intercourse. Bolling and Voeller (1987) and Bolling (1976) found that women admitted to performing anal intercourse only after repeated personal interviews. Thus, typical single contact surveys may not be able to overcome self-presentation problems associated with reporting sexual behaviours perceived as deviant by heterosexual adults.

The strategy in coping with self-presentation bias has typically been one of minimizing its effect. A complementary tack is to measure self-presentation bias. Measures of the tendency to make socially desirable responses have been around for some time and problems in assessing this construct have been discussed elsewhere (Millham 1974; Shulman and Silverman 1974; Larsen et al. 1976; Martin and Greenstein 1983). Here we focus on the less written about issue, assessing threat associated with disclosing sexual information.

Two measures of sexual self-disclosure (SSD) have been recently developed (Catania et al. 1986; Herold and Way 1988). Catania's SSD scale assesses people's willingness to disclose general categories of sexual information (sexual problems, sexual history, "personal sexual information of any kind") across various social contexts that include different research situations and circumstances involving friends, lovers, strangers, therapists, physicians, and parents. Herold and Way's instrument examines the willingness to disclose more specific topics (e.g., views on sexual morality, sexual techniques, contraception, sexual fantasies), but to fewer numbers of target individuals (friends, dates, parents).

Both measures are based on a rich literature concerning self-disclosure (see reviews by Jourard 1971; Cozby 1973; Chelune 1979) and have good internal reliability. Catania's scale also has good test-retest reliability and does not bias behavioural reports. Both measures have good construct validity. Catania's scale correlates with nonresponse rates and predicts willingness to volunteer for and attend FTFI. Herold and Way's measure correlates with sexual guilt (high guilt low disclosing), self-esteem (high self-esteem – high disclosing), perceptions of the target person's sexual comfortableness, frequency of sexual behaviours, and numbers of partners. The guilt correlation is interesting in that it supports the hypothesis that willingness to self-disclose sexual information is related to the perceived threat of sexual material. Because people with high self-esteem are typically less affected by negative reactions from others (cf. Herold and Way 1988), then Herold and Way's SSD scale may also tap the willingness to give undesirable responses.

Measures of SSD have not been put to use by current AIDS investigators. One application is to employ an SSD measure as a statistical control for the effects of question threat. Because we currently have inadequate knowledge on how to minimize response bias, it would seem of clear value to utilize these easily administered scales in survey and evaluation research.

Interviewer Factors

Interviewer's have a crucial role to play in conducting FTFI and in administering SAQ. Three interviewer factors have been described: interviewer role demands (i.e., rules governing the interviewer's behaviour); the interviewers' actual behaviour (e.g., ability to follow the rules, comfort with asking sensitive questions); and interviewer's extrarole characteristics (e.g., race, age, social class) (Sudman and Bradburn 1974).

Prior studies have found few effects for interviewer gender, skill, sexual experience, or age on responses to sexual questions (DeLamater 1974; DeLamater and MacCorquodale 1975; Johnson and DeLamater 1976). One exception is that young adult female respondents report less current sexual behaviour to male interviewers than to female interviewers (DeLamater 1974). Because this past work has relied on young adult white heterosexual respondents, the interviewer findings may not be generalizable to many subpopulations of major interest to AIDS investigators (e.g., IVDUs, gay

men, Hispanics).

A recent study found that, relative to female interviewers, male interviewers obtained higher levels of reported fellatio from gay men, but this relationship was insignificant when controlling for research site (Darrow et al. 1986). However, male and female interviewers were not randomly assigned to sites, leaving open the possibility of an interviewer by site interaction.

Overall, the literature on interviewer factors is inconclusive and possibly misleading. It is also difficult to judge the extent of methodological bias based on current research experiences with gay men. As we will discuss, gay men may be more open about their sexual behaviour than other populations. Indeed, many gay men may be less sensitive to differences in data-collection procedures, but it would be dangerous to assume that methodological approaches used with gay men are generalizable to other populations.

Respondent Factors

The person's degree of motivation to perform the role of respondent may be an important source of response bias. Highly motivated respondents may make a greater effort to understand and answer questions, whereas less-motivated participants may skip items or give less thoughtful answers. Those groups most devastated by AIDS are probably highly motivated to participate in AIDS research from the standpoint of altruistic and self-preservation motives.

People less concerned with AIDS (e.g., adolescents) may prove to be less-motivated respondents. However, for those willing to volunteer for sex research, there does seem to be some inherent interest in talking about sex (Catania et al. 1986). Whether groups other than, for instance, gay men will want to "go on talking" about sex across multiple waves of assessment remains to be seen.

Data-Collection Methods

Overview

As discussed elsewhere, data-collection procedures may influence people's willingness to volunteer for studies assessing highly sensitive topics (AIDS, HIV testing, sexuality) and willingness to provide honest answers. This section provides an overview of various data collection procedures that can be used with structured quantitative response formats. For in-depth and detailed discussions on rules for constructing interview schedules, questionnaires, diaries, and phone interviews see Bradburn and Sudman (1979), Sudman and Bradburn (1983), and Lavrakas (1987). Sudman and Bradburn (1983), in particular, provide a highly cogent discussion of how to cope with assessments of sensitive topics. The operating principle from their work is that with sensitive topics (sex, AIDS, drug use) response bias typically decreases as the degree of privacy the method affords the respondent increases. The down side to this principle is that the methods that afford the most privacy (e.g., questionnaires, phone surveys) may produce additional problems in volunteerism or are impossible to use with certain kinds of respondents.

In general, FTFI with structured interview schedules, SAQ, telephone interviews, diaries, or some combination of these represent the primary data-collection methods being employed in AIDS research. With the exception of diaries, all these data-collection techniques assess sexual behaviour in terms of retrospective reports for some prior time interval.

Diaries

Diaries may be used to assess past behaviour, but they also afford the opportunity to measure behaviour "prospectively" (e.g., see Verbrugge and Depner 1980). People can be recruited to complete diaries through an initial face-to-face or phone contact. Because instances of some behaviour can be recorded on the day that they occurred (or at least by the next day), common problems of retrospective data (memory lapse and telescoping) are surmounted. In terms of health behaviours, diaries produce higher counts and rates than retrospective indicators of health activities (see Verbrugge and Depner 1980). In general, diaries have relatively high completion rates, and, within limits, appear to be useful even with respondents who have little formal education (low-education respondents, however, tend to drop out sooner). Keeping diaries for periods of three months show relatively low levels of attrition under certain conditions (i.e., when diaries picked up by staff; Sudman and Lannom 1979). Although diaries may provide much more precision and detail than other methods, to

date, diaries have not been reportedly used in AIDS behavioural studies.

Phone Interviews

Phone interviews are being used extensively in conducting AIDS behavioural research in the US. Random digit, dial phone surveys are a rapid, efficient, cost-effective, and rigorous way to collect sensitive information (Coombs and Freedman 1964; Hochstim 1967; Kegeles et al. 1969; Rogers 1976; Klecka and Tuchfarber 1978; Bradburn and Sudman 1979; San Francisco AIDS Foundation 1986; Lavrakas, 1987; Levy and Albrecht 1989). Compared to other methods that require more extensive effort to contact respondents (e.g., FTFI, diaries), the phone interview is an inexpensive, rapid method of data collection that lends itself well to brief (20-30 minute) quantitative assessments.

The US Bureau of the Census (1981) estimates that 98% of all households in this country have telephones. Moreover, random digit dialling procedures generate both listed and unlisted numbers (Waksberg 1978) and produce samples with characteristics and substantive data very similar to that generated by research employing more complex probability samples of households and personal interviews (Klecka and Tuchfarber 1978). Hochstim (1967) also demonstrated that telephone interviews generate data (on nonsexual topics) of equal quality to that produced by face-to-face methods and mail contacts.

Telephone surveys are attractive for assessing sensitive topics because respondents feel safe, comfortable, and they can answer questions anonymously. For instance, Coombs and Freedman (1965) obtained a 97.6% response rate in telephone interviews involving issues of birth control. Bradburn and Sudman (1979) compared telephone, standard face-to-face, face-to-face with a randomized response format, and SAQ methods; telephone interviews yielded the highest percentage of completed interviews on "drunken driving" interviews (77.8%; face-to-face randomized response yielded 58.1%), and was second only to standard face-to-face methods on "bankruptcy" interviews (68.9% versus 70.3%). Last, Kegeles et al. (1969) found no significant differences between respondents' reports of personal health practices for telephone versus FTFI. Thus, telephone interviews, besides being cost effective and having rapid turn-around, yield relatively high response rates, and produce high-quality data on sensitive issues.

However, phone surveys under-represent low socioeconomic respondents and individuals residing in dwellings with multiple other adults. There is also evidence that phone interviews yield more overreporting of socially desirable behaviour, but less underreporting of socially undesirable behaviour than FTFI (Locander et al. 1976). It is difficult to judge how this observation translates into bias in terms of reporting sexual behaviour. Is admitting to condom use during receptive anal intercourse equivalent to reporting a sensitive socially undesirable behaviour or to giving a socially desirable response? Obviously, phone interviews cannot be used with subpopulations with low rates of phone ownership. To my knowledge, studies have not been conducted to compare different ethnic groups, either within countries or across nations, on their willingness to be interviewed by phone versus some other method.

In conducting AIDS behavioural research, phone interviews have been used with adolescents (Strunin and Hingson 1987), gay men, and heterosexual adults in California and Illinois (e.g., see Catania, Coates, Kegeles, Ekstrand et al. 1989; communication technology reports; Kevin O'Reilly, Centres for Disease Control, personal communication July 1987). Investigators are also using random digit dial techniques to recruit respondents for intervention studies (John Noell personal communication), and focus group studies (see Zeller's paper, this volume).

Face-To-Face Household Interviews

Face-to-face interviews have been used extensively to assess sexual behaviour, beginning with Kinsey and continuing up to today. This is an expensive method when conducting large-scale household probability samples (costs may be reduced, but attrition increases greatly if respondents come to a research site for an interview; see Volunteerism section). A major advantage of FTFI is that they permit a great deal of opportunity to detect points of confusion by the respondent with regard to particular questions. Thus, the FTFI provides more opportunity to correct respondents' misperceptions, provide explanations, and train respondents in the use of response scales. As we will discuss later, the FTFI may produce greater volunteer bias with some

respondents. Considerable work needs to be conducted to show if FIFIs work equally well when collecting sexual information from people of different socioeconomic classes, ethnic groups, and subcultures.

Self-Administered Questionnaires

Self-administered questionnaires have also been used extensively in AIDS research. As will be discussed, SAQ provide a great deal of privacy under appropriate conditions. They are inexpensive to use, particularly when administered in group situations (e.g., school classes, HIV testing centres, health clinics), because one person can recruit and administer SAQ to many people simultaneously. In collecting data from more than 1000 respondents attending free anonymous HIV antibody testing-centres in California (a highly sensitive environment to conduct research in), we found SAQ to be highly acceptable to respondents (98% volunteer rate) and preserved patient flow through the clinic. We have also used mail-in SAQ in our ongoing longitudinal study (1984-present) of 600+ gay men in San Francisco (recruited from bars and bath houses) (McKusick et al. 1985). In seven waves of data collection, we have maintained a 70+% return rate (standard reminder letters and call-backs are used). Of course, SAQ are limited by the respondents' level of education, reading ability, and the investigator's ability to employ terminology understandable to a wide range of respondents.

Comparing Diaries, Phone-Interviews, and Household FTFI

There are few studies that have compared the utility of the various data-collection approaches in assessing sexual behaviour and related measures (except with respect to vaginal intercourse and masturbation; Bradburn et al. 1978). There have been, however, some excellent comparisons of these methods in the general area of health surveys. The Survey Research Lab at the University of Illinois (Champaign, Illinois) have compared telephone, face-to-face, and diary methods of data collection in longitudinal studies (random population based samples; Sudman and Lannom 1979). The diary method also contrasted groups who mailed in diaries versus those who had the diaries picked up by survey staff; the effects of giving compensation for completing a diary were compared with a no compensation condition. The major findings can be summarized as follows:

- Diary pick-up methods (where a staff person collects diaries from respondents) obtain as high levels of cooperation as do repeated FTFI or phone interviews.
- Diary mail-in methods are substantially worse in obtaining household cooperation than are the other methods.
- Compensation has no significant effect on cooperation for diary pick-up methods, but does have significant effect for mail-in procedures.
- Diaries produce better-detailed responses to health questions, higher levels of minor health events than other methods, and greater accuracy on some types of questions.
- Looking only at costs and cooperation, phone interviews are the least-expensive method that yields high cooperation.
- Diary mail-in procedures, which include initial face-to-face contact, are more expensive than phone interviews, but cheaper than all other methods.
- Diaries that are picked up are easier to code and have the most complete data and detailed information because of interviewer editing conducted at the time of the monthly visit.

These findings indicate that there is a need for research on diaries as a means of prospectively assessing sexual behaviour. If one is going to incur the expense of a FTFI contact, then the use of a diary to augment the accuracy of the data seems reasonable. For quick results on limited sections of the population, phone interviews may suffice.

Volunteer Bias

Overview

The present section reviews literature on volunteer bias in studies of human sexual behaviour with attention to the problems of gathering sexual information in the context of AIDS. With respect to volunteer bias, two questions are examined. Is volunteerism in sex research problematic enough to restrict generalizability of the findings? Second, under what conditions can we maximize people's willingness to volunteer? For instance, are people more willing to volunteer for studies that assess

sexual behaviour by SAQ as opposed to a FTFI?

Sampling or volunteer bias is a major concern among sex researchers because of the highly sensitive nature of the topic for respondents. Kinsey was aware of this problem and attempted to minimize self-selection bias by securing full participation among members of selected organizations (prisons, college fraternities; Kinsey et al. 1948; 1953). His efforts were not entirely successful in this and fewer than 30% of his participants were recruited in this way.

Kinsey acknowledged that his respondents may have been atypically extroverted, self-assured, and sexually uninhibited. This view was indirectly supported by Maslow and Sakoda's (1952) comparison of Kinsey volunteers and nonvolunteers. They found volunteers had higher self-esteem than nonvolunteers. This finding throws the representativeness of Kinsey's sample into question because high self-esteem is associated with a greater willingness to disclose sexual information (Herold and Way 1988). Even though Siegman (1956) was unable to replicate Maslow and Sakoda's results, their is little reason to believe that the "snowball" technique used by Kinsey would produce a representative sample of adults. The quality of Kinsey's sample has important implications for current projections of the AIDS epidemic. Indeed, present estimates of the number of gay men infected by HIV are based on Kinsey's estimates of the proportion of gay men in the US.

Volunteer bias is by no means peculiar to sex research. To the contrary, it is an ambiguous problem in social science research (Rosenthal and Rosnow 1969). Nonetheless, sex research may represent an extreme case in that sex research is more likely to be associated with volunteer bias than most other topics of interest to social scientists. Experimental and nonexperimental studies have found sharp differences in sexual attitudes and behaviours between volunteers and nonvolunteers for sex research. The survey studies, however, have typically not assessed differences between volunteers and nonvolunteers on sexual variables (e.g., Maslow and Sakoda 1952; Siegman 1956; Benson and Bentley 1958; Bauman 1973), with some exceptions (e.g., Catania et al. 1986).

The bulk of the evidence on volunteer bias in sex research comes from laboratory studies with college students. These studies, together with the survey literature, report on volunteer bias in relation to four classes of variables: sexual attitudes, self-reported sexual behaviour (usually vaginal intercourse), personality characteristics, and demographic variables. The personality findings will not be discussed, other than to point out that no major differences other than on self-esteem have been found between participants and nonparticipants (Maslow and Sakoda 1952; Siegman 1956; Martin and Marcuse 1958; Barker and Perlman 1975; Farkas et al. 1978). The personality findings are consistent with Seigman's (1956) conclusion that volunteers are no more or less anxious or rigid than nonvolunteers.

Attitudes Toward Sex

Five of six studies that examined sexual attitudes found distinct differences between volunteers and nonvolunteers (see Table 2). Volunteers tend to be more sexually liberal and permissive, evidence less sexual guilt, are less sexually inhibited, hold more positive views of erotic materials, are more sexually curious, and place a higher value on sex research (Kaats and Davis 1971; Farkas et al. 1978; Wolchik et al. 1983; 1985; Morokoff 1986).

In general, the largest differences between volunteers and nonvolunteers occurred when the research required substantial effort on the part of the respondent (e.g., going to a research site on one's own time) beyond that required to complete a questionnaire during class time (e.g., Kaats and Davis 1971; Farkas et al. 1978). In addition, some of the studies asked participants to submit to invasive procedures (e.g., partially undress, direct genital measures taken).

AIDS-related sex survey research conducted in the field or by phone obviously require much less from respondents with one exception. That is, studies collecting blood samples in addition to behavioural data may be placing a larger burden on the respondent. How blood-drawing requirements and the need to test for HIV antibodies influence volunteer bias is just beginning to be understood. For instance, Hull et al. (1988) recently found that men who failed to volunteer for HIV antibody testing were 5.3 times more likely to be infected with HIV. Black and Hispanic nonvolunteers were 8.8 times more likely to be infected than their white counterparts (for nonvolunteers, blinded blood tests were conducted on blood samples collected for another purpose). If higher seroprevalence rates reflect higher levels of risk behaviour (Winklestein

et al. 1987), then Hull et al.'s data suggest that studies requiring HIV antibody testing will underestimate the proportion of high-risk individuals in the population.

Sexual Behaviour

The attitudinal data are reflected in behavioural differences between volunteers and nonvolunteers. Six of the eight studies that examined sexual behaviour demonstrated significant behavioural differences between participants and nonparticipants (Farkas et al. 1978; Saunders et al. 1983; Wolchik et al. 1983, 1985; Catania et al. 1986; Morokoff 1986). Relative to nonvolunteers, volunteers reported higher levels of vaginal intercourse and masturbation, more unusual sexual experiences, greater noncoital sexual activity, and more exposure to erotic materials. The findings are not always consistent across studies, but the overall picture is clear. In terms of sexual behaviour, volunteers are different from nonvolunteers, although subtle, and as of yet unknown, details of the study may influence the nature of the specific differences.

What is not apparent, however, is if volunteer/nonvolunteer behavioural differences reflect true behavioural differences or simply differences in the willingness to report particular types of behaviour. Indeed, relative to nonvolunteers, volunteers do describe themselves as more willing to self-disclose sexual information. Moreover, the motives underlying volunteer bias may not always be apparent. At times, volunteers may be seeking help for a sexual problem (cf. Catania et al. 1986). Several studies have found volunteers to be more likely than nonvolunteers to report sexual difficulties (e.g., erectile difficulties, sexual trauma; Farkas et al. 1978; Wolchik et al. 1983). Thus, volunteers may not only be more willing to talk about sex than nonvolunteers, they may in particular see sex studies as an opportunity to talk about their sexual problems.

Current findings have several implications for AIDS research. If help-seeking is a motive for volunteering, then AIDS research participants may be volunteering because they perceive a problem. That is, they may see their sexual behaviour to be problematic with respect to contracting HIV and, consequently, are seeking information on how to rectify the situation. This scenario implies that people who perform high-risk behaviour, but do not perceive their activities to be a problem, are then less likely to volunteer. Alternatively, if one believes that nonvolunteers for sex research are less sexually adventuresome than volunteers, then a very different picture emerges. That is, the nonvolunteer for AIDS research might be characterized as a sexually inhibited person who performs little high risk sex. For investigators focusing on individuals who perform high-risk sex, this type of bias would be of less concern. However, if you want to estimate the prevalence of high-risk behaviour in a population, such bias would produce overestimates.

The issues and speculations mentioned in the foregoing deserve study. In particular, such studies need to examine for differences between volunteers and nonvolunteers on sexual activities of major importance to AIDS prevention (e.g., condom use, anal sex).

Demographic Differences

In terms of demographic variables, only sex appears to have much of a relationship with the decision to participate in sex research. In three of five studies, males were more likely than females to volunteer (Siegman 1956; Kendrick et al. 1980; Wolchik et al. 1985), and the remaining studies found no sex differences (Bauman 1973; Barker and Perlman 1975). Although the findings concerning sex differences are less than definitive, they do fit Kendrick et al.'s (1980) observation that male volunteers occupy the traditional male sex role whereas female volunteers are more androgynous.

Limitations and Research Needs

Several limitations of the literature on volunteer bias are worth noting. The most obvious is that, with one exception (see Table 2), all were limited to college undergraduates. One naturally wonders about the generalizability of results based on youthful, predominately middleclass subjects. Moreover, we need to extend the arena of research to include the study of volunteer bias in intervention studies designed to reduce high-risk sexual behaviour.

This work needs to progress rapidly if we are to understand to whom the prevention programs are generalizable. Last, we need a clear understanding of how our methods of data collection influence volunteerism. Do SAQ produce less volunteer bias than FTFI as some results suggest (Catania et al.

1986) or are phone interviews more advantageous? These are critical questions that the AIDS epidemic found us ill-prepared to answer.

A New Source of Volunteer Bias

A new source of volunteer bias, upon which we can only speculate, may be related to the public's reaction to the AIDS epidemic and our cultural proclivity toward homophobia. Are some high-risk people failing to volunteer because they fear reprisals (social stigma, discrimination) related to the kinds of sexual behaviour they enjoy. Such fears have a firm basis when one considers efforts to pass laws that would "legalize" prejudice against people with sexual orientations and lifestyles divergent from those of the majority. For example, Proposition 102 in California (Fall Election 1988) would have required investigators to not only report names of all HIV positive people to health officials, but also the names of people suspected to be HIV positive! Although this proposition was defeated, this is the second election in a row that has featured this type of AIDS initiative and it is likely to appear on the ballot in the next election. It seems reasonable to assume that some potential respondents are feeling extremely self-protective about the details of their sexual behaviour. The implications for our ability to generalize findings are obvious.

Conclusions and Summary

Much of the methodological work in the area of sex research has been conducted with samples of heterosexual college-age students. Currently, we have little or no methodological data to guide research on the sexual behaviour of many groups at high risk for HIV infection (e.g., IV-drug users, ethnic minorities). Cultural differences between groups at high risk for HIV infection in the language of sex and in the willingness to participate in AIDS research are obstacles of uncertain proportions for AIDS behaviourial research. Nevertheless, past work does provide direction for further study. It is abundantly clear that people differ in their willingness to disclose sexual information. This fundamental observation underscores the critical nature of understanding how types of assessment (SAQ, FTFI, phone interview, diaries) influence people's willingness to volunteer for sex studies and, subsequently, respond to critical AIDS-relevant questions.

In terms of response bias, the richest literature is on task factors (e.g., type of assessment, response formats, order, self-presentation bias), although no studies have focused on factors influencing recall accuracy. Only a handful of studies have examined interviewer effects in sex research. This is quite disconcerting as interviewer effects are particularly salient when interviewer-respondent variables are related to the topic under study (Sudman and Bradburn 1974). No studies have examined respondent motivation in the context of sex or AIDS research.

Within the interview it is probably best to assume the worst in terms of self-presentation bias and order effects. Efforts to minimize or measure these problems include:

- Communicating to the respondent a nonjudgmental attitude toward those behaviours that some respondents may consider socially undesirable to report;
- Using open-response formats and sexual terms familiar to respondents;
- Including measures of self-presentation bias; and
- Conducting extensive pretesting of the interview to elicit respondents' perceptions of sexual terms and research procedures.

Until methods are developed to increase recall, one- or two-month estimates are probably optimal for assessing frequencies of sexual behaviour (i.e., given their high test-retest reliability). This recommendation is not without its caveats. A problem with one-month reports is that they may not represent the typical pattern of a person's sexual behaviour over the past year. This is particularly true for teens who may have more intermittent and sporadic sexual contacts than adults. Further, assessments of the numbers of sexual partners are probably more meaningful in terms of the past years' contacts than the past months'. Obviously, assessments of both short- and long-time intervals can be obtained in SAQ and FTFI to ascertain the representativeness of short reporting periods.

Use of diaries may resolve memory difficulties, but diaries require much more effort from the respondent and may not be practical for obtaining population estimates of the prevalence and distribution of high-risk behaviours. Obviously, FTF methods would allow for more probing to resolve the issue of response representativeness, but

the drawback to FTFI may be greater volunteer bias than with SAQ. In particular, procedures that require additional effort (e.g., coming to a research site, having blood drawn, participating in multiple wave studies or intervention programs) should be assumed to increase volunteer bias until shown otherwise. Characterizing the nature of the volunteer bias, in terms of behavioural differences between participants and nonparticipants, is critical to understanding the limits of our efforts to project the course of the AIDS epidemic.

The AIDS epidemic caught us ill prepared to answer basic questions about people's sexual behaviour. Efforts to fill this void have not always been based on sound methodological footing. Unfortunately, we are in the uncomfortable position of having to play catch-up. One way of catching-up sooner would be to ensure that most federally funded AIDS-related behavioural studies include methodological variations of their proposed procedures. Priority must be given to rapid dissemination of methodological results without the usual delays involved in the publication process.

Table 1. Studies of Response Bias in Sex Research.

STUDY	SAMPLE AND DESIGN
Clark and Wallin (1964)	Adult heterosexuals, N=428 couples; SAQ used in a longitudinal design. Partners coital data compared.
Levinger (1966)	Adult heterosexual, N=60 couples, SAQ used; partners coital data compared.
Johnson (1970)	Adult heterosexuals, N=130 couples, FTFI; varied order of extramarital attitude and behaviour items.
Udry and Morris (1967)	Adult heterosexual women N=15 (blue-collar); urine samples collected and SAQ administered on daily basis for 90 days. Compared sperm index with reports of coitus (yes/no).
Bradburn et al. (1978), also see Blair et al. (1977)	Random sample of adults, N=1172; used SAQ and varied three factors: response format (open and closed), length of question (short/long), wording (standard, respondents words for sexual terms).
Catania et al. (1986)	Undergrads, white, heterosexual, men and women; N=193 SAQ used in phase one; phase two provided opportunity to volunteer FTF interview; phase three involved conducting the interviews; Compared responders and non-responders (also see Table 2). Varied order of questions and measured disclosure tendencies.
Clark and Tiffit (1966)	Undergrads, N=40. Completed SAQ in class, then reported to Lab and told about polygraph and given chance to change SAQ responses.
Johnson and DeLamater (1976)	Two samples: young adults (students and nonstudents), N=1361; used SAQ and FTFI; adults, N=2000; used both FTFI and SAQ. Varied gender of interviewer, assessed interviewer characteristics (e.g., skill, sexual experience).
DeLamater (1974)	Student sample, N=300; used FTFI; varied order of questions and sex of interviewer.
DeLamater and MacCorquodale (1975)	Random sample of young adults (student and nonstudent), N=1361 (also see Johnson and DeLamater 1976); used both FTFI and SAQ. Compared FTFI and SAQ on nonresponse rates, order effects.
Millstein and Irwin (1983)	Adolescent females; N=108; randomly assigned to SAQ, computer presented SAQ, or FTFI. Compared methods.
Zelnik et al. (1981)	Random sample for adolescent females, N=1016; compared FTFI and Random Response Technique.
Czaja (1987-88)	Heterosexual men and women; pilot study (N=63) compared phone and FTF interviews of sexual behaviour; higher numbers of sexual partners reported in phone than FTF interviews.
Andersen and Broffitt (1988)	Heterosexual adult women (healthy and illness groups, Ns=57, 67); examined test-retest of aggregated measures of sexual behaviours (factors from Sexual Experience Scale).
Coates et al. (1986)	Homosexual men (N=26); collected test-retest data (three-day interval) on lengthy list of sexual activities.
Coates et al. (1988)	Homosexual men (N=136 partners); examined interpartner correlations for lengthy list of sexual activities.

NOTE: SAQ: Self-administered questionnaire; FTFI: Face-to-face interview.

Table 2. Volunteer Bias in Studies of Sexual Behaviour and Attitudes

STUDY	SUBJECTS	DESIGN	PREDICTORS	RESULTS
Nonexperimental Studies				
Benson and Bently (1958)	1000 young married couples	Comparison of couples who did or did not grant FTF premaritally	Premarital intercourse, organization, participation, libido, orgasm	No differences between v, non-v
Bauman (1973)	550 college students	Comparison of v, randomly sampled students	Sexual permissiveness, experience, contraceptives, religiosity, self-judged sexual knowledge	v less devout, females dated less. Differences in distribution and correlations between variables
Maslow and Sakoda (1952)	151 college students	Comparison of v, non-v for Kinsey study	Self-esteem	v higher self-esteem (correlate of unconventional sexual attitudes, virginity, masturbation)
Siegman (1955)	95 college students	Comparison of Kinsey v and non-v	Anxiety, defensiveness, rigidity	No differences between v, non-v
Experimental Studies, Noninvasive				
Catania et al. (1986)	193 college students	Examined predictors of volunteering for and attending FTFI	SSD scale, sexual experience, completing SAQ with sex content	Relative to non-v, v were more disclosing, had more varied sexual repertoires, read more sex books
Barker and Perlman (1975)	254 college students	Comparison of SAQ return rates for personality (parenting) and sexuality studies	Demographics, social participation, personality	Few differences between v, non-v, none related to permissiveness
Kaats and Davis (1971)	657 college students	Comparison of v selection, v completion, and in-class non v for SAQ	Sexual liberalism, permissiveness, coital and non-c experience	v selection group more liberal, more permissive, more non-c experience
Kendrick et al. (1969)	157 college students	Comparison of M,F v rates for soft- versus hard-core erotica, erotica versus perception experiment	Gender	Females v more for soft- versus hard-core, more for perception experiment erotica

Table 2. Volunteer Bias in Studies of Sexual Behaviour and Attitudes (continued)

STUDY	SUBJECTS	DESIGN	PREDICTORS	RESULTS
Experimental Studies, Noninvasive (continued)				
Martin and Marcuse (1958)	400 college students	Comparison of v for learning, personality, sex, and hypnosis experiments	Intelligence, anxiety, ethnocent, personality (path)	No differences among v, non-v for sex study
Saunders et al. (1983)	120 college students	Comparison of v for personality, erotica experiments	Mood, sex-role orientation, religiosity, erotophilia, sexual experience, personality, sexual arousal	v for erotica more experienced sexually. Female v more erotophilic
Farkas et al. (1978)	108 college and noncollege males	Comparison of v, non-v for lab study involving erotica and penile strain measurement	Guilt, social desirability, heterosexual behaviour, demographic, personality	v less sexual guilt, fear, more sexual experiences, more erectile difficulties
Morokoff (1986)	92 female college students	Comparison of v, non-v for study involving erotica and genital measurement	Sexual experience, repression, arousal, inhibition, guilt	v more noncoital experience, more masturbatory experience, less inhibition, and more unusual sexual history
Wolchik et al. (1983)	296 female college students	Comparison of v, non-v for study involving erotica and genital measures of arousal	Demographic, sexual experience, fear, and guilt, attitudes toward erotica	v had more sexual trauma, less objection to erotica more masturbatory experience, earlier and more exposure to erotica, less sexual fear
Wolchik et al. (1985)	648 college students	Comparison of v rates for six more or less intrusive sexual experiments	Sexual experience, difficulties, attitudes toward sex and erotica	v more experienced, curious, more experienced with erotica, value sex research more, more liberal/ females less worried, males more masculine

Note: V: Volunteer; NON V: nonvolunteers; SAQ: Self-administered questionnaire; NON-C: noncoital; M: male; F: female; FTFI: face-to-face interview

Reducing HIV Transmission: Lessons From the Recent Past

The original of this paper was prepared by staff and consultants of the Academy for Educational Development, 1255 - 23rd Street, NW, Washington, DC, USA 20037, as part of a proposal submitted to the United States Agency for International Development. The principal authors were Mr Gary MacDonald *and* Mr Michael Helquist, *who are Senior Program Officers, and* Dr William Smith, *Executive Vice President. This edited version is reproduced with permission from the Academy.*

Résumé en français. *Maladie à répercussions sur le style de vie désigne ici toute maladie qui, pour en réduire la morbidité ou la mortalité, exige un changement dans le style de vie (sexualité, alimentation, activités, retenue, auto-médication).*

La prévention par l'éducation a contribué d'une manière significative au contrôle des problèmes de santé reliés au style de vie tels que les maladies transmissibles sexuellement (MTS), les grossesses non désirées, le cancer et les maladies cardiaques. Les faits permettent-ils de penser que la prévention par l'éducation pourrait être aussi favorable dans le cadre de campagnes contre l'infection par le virus de l'immunodéficience humaine (VIH)? Plus particulièrement, l'éducation sur le syndrome d'immunodéficience acquise (SIDA) donnera-t-elle les résultats escomptés? Dans le cadre des conclusions d'une vaste étude de données et de travaux analytiques sur plusieurs maladies à répercussions sur le style de vie, d'importantes recommandations, leçons et idées peuvent être retenues dans la lutte contre le SIDA.

L'éducation peut influer sur le comportement et le comportement, à son tour, sur les taux d'infection. Dans une étude menée à Londres, des chercheurs ont déterminé la prévalence de la séropositivité au VIH chez les hommes homosexuels et bisexuels suivis à une clinique sur les MTS depuis 1982. L'étude a montré qu'il y avait eu une hausse rapide de la prévalence de la séropositivité au VIH entre 1982 et 1984 chez les hommes homosexuels et bisexuels (7,4 % par année). Cette augmentation cependant ne s'est pas maintenue entre 1984 et 1986 (accusant une baisse de 1,8 % par année).

Cette chute apparente du taux des nouvelles infections est sans doute à mettre en corrélation avec les changements dans le comportement sexuel, dont des études antérieures avaient fait état. A cette même époque, les chercheurs ont aussi relevé des signes de changement. Le nombre de partenaires diminuait et on notait des tendances vers une sexualité à moindre risque. L'emploi de préservatifs avait augmenté, mais pas de manière importante, au moment de l'étude (les données avaient été rassemblées avant la grande campagne de prévention du SIDA faite dans les médias de Londres).

Les données ont aussi montré qu'il y avait une relation entre l'information sur le SIDA et un comportement sexuel à moindre risque. Les principales sources d'information sur le SIDA pour ces hommes homosexuels et bisexuels, de leur propre aveu, étaient le personnel des cliniques sur les MTS, les journaux et revues pour homosexuels et les organisations philanthropiques bénévoles sur le SIDA.

Dans le cadre d'une étude sur la santé des hommes de San Francisco, un échantillonnage aléatoire d'hommes homosexuels et bisexuels a été établi dans la zone de 6 km² de la ville où l'épidémie du SIDA a été la plus intense.

Les chercheurs analysèrent le taux de séroconversion au VIH au cours de trois périodes. Ils estimèrent qu'entre juillet 1982 et décembre 1984 le taux annuel de séroconversion a été de 18 %. Pendant deux autres intervalles de six mois, soit entre janvier et décembre 1985, ce taux a chuté à 5 %, puis à 3 %. Les chercheurs ne trouvèrent pas de meilleure explication au phénomène que la réduction substantielle du nombre de rapports sexuels sans protection, quoique d'autres facteurs comme la résistance individuelle au virus aient sans doute joué un rôle.

L'étude ne comportait pas de composante éducation, mais les données recueillies reflétèrent des changements de comportement pendant et après les grandes campagnes d'éducation faites dans la ville. En outre, à ce moment-là, le SIDA est devenu un sujet plus fréquemment et régulièrement couvert par les médias locaux et nationaux.

Avant le lancement du programme d'éducation des travailleuses de Nairobi, au Kenya, seulement 8 % des prostituées avaient signalé l'emploi de préservatifs par certains de leurs clients. En octobre 1986, soit cinq mois après le début du programme, ce pourcentage était passé à 85 %.

Les statistiques des services de santé de la ville de New York indiquent que le taux de gonorrhée chez les hommes de 15 à 44 ans est passé de 129 nouveaux cas par 100,000 personnes en 1980 à 74 en 1983. Par comparaison, le taux de gonorrhée chez les femmes a augmenté pendant la même période.

L'étude en profondeur portant sur 745 homosexuels de New York – volontaires, personnes dirigées vers un établissement spécialisé et personnes recrutées dans la rue représentant un sous-ensemble d'homosexuels de la ville – a montré que l'activité sexuelle, d'après les données fournies volontairement, avait décliné de 78 % depuis que les sujets de l'étude avaient entendu parler pour la première fois du SIDA.

Parmi les conclusions à retenir des études menées à ce jour sur la prévention du SIDA, citons:

- *L'absence d'études longitudinales montrant de façon probante que les interventions par l'éducation ont réduit de manière substantielle le taux de séroconversion au VIH;*
- *Le lien hautement probable entre l'information (tant systématique qu'accidentelle) et la réduction du comportement risqué;*
- *La corrélation positive entre la perte d'un ami ou d'un membre de la famille et la volonté de changer de comportement;*
- *L'accroissement des connaissances par suite de campagnes d'éducation. Les changements de comportement n'ont pas été documentés, même dans le cadre d'importantes campagnes d'éducation bien orchestrées;*
- *Les répercussions de trois facteurs psychosociaux – les risques personnels, les conséquences du comportement risqué par rapport aux autres facteurs dans la vie personnelle et l'attrait ou la facilité d'adoption d'autres comportements proposés – semblent particulièrement importants pour changer le comportement et réduire les risques de transmission du VIH;*
- *L'efficacité de sources d'information crédibles pour changer le comportement, notamment le recours à des pairs pour rejoindre les populations socialement isolées;*
- *L'efficacité de l'éducation ne se résume pas à la simple transmission d'informations. Le counselling, l'offre de services, l'aide interpersonnelle, l'échange de seringues et la promotion et la distribution de préservatifs se sont tous révélés essentiels;*
- *La concurrence provenant de campagnes contre l'usage de préservatifs, la censure dans la publicité, les fausses histoires dans les journaux, la publicité fondée sur l'attrait sexuel et les rumeurs ont réduit considérablement l'efficacité des campagnes d'éducation positives visant à réduire les risques;*
- *Les croyances des gens au sujet de l'information sur le SIDA relèvent de raisons inexpliquées et idiosyncratiques.*

Malgré toutes les connaissances sur la transmission des maladies, il y aura toujours un sous-groupe important de personnes qui ne modifiera pas son comportement, même s'il représente des risques. Ces personnes ont besoin d'aide et de programmes visant à modifier leur comportement. Dans le cadre de la lutte contre le cancer, même s'il est difficile de déterminer clairement quelle stratégie d'intervention est la plus efficace, il est évident que la plupart des interventions sont plus efficaces que la non-intervention.

L'on a recours à des stratégies différentes selon qu'il s'agit de réduire les risques du tabagisme dans les populations de fumeurs ou de retarder des pratiques dangereuses auprès de populations de non-fumeurs, notamment les adolescents.

La connaissance des « moteurs du changement » est un facteur important du succès. La santé n'est pas toujours une incitation suffisante pour

prévenir les comportements risqués. La beauté, l'attrait sexuel, la satisfaction d'être en pleine forme en sont d'autres.

Il faut concevoir les programmes de façon à amener les participants à apporter des changements mineurs dans leur mode de vie, et leur permettre ainsi de connaître le succès et de prendre de l'assurance. Des changements graduels reposant sur un engagement personnel, sont plus faciles à apporter que des changements radicaux ou de grande échelle.

Les programmes de prévention des maladies cardiaques couronnés de succès se caractérisent par les éléments suivants:

- *Ils sont axés sur des comportements-cibles précis qui relèvent du contrôle des participants.*
- *Ils mettent l'accent sur des interventions simultanées visant individus, groupes, organisations et collectivités, plutôt que sur des interventions uniques visant un seul groupe.*
- *Ils préconisent des changements graduels sur une certaine période de temps, afin de minimiser les plus grandes difficultés associées aux changements de comportement.*
- *Ils ont recours périodiquement à des méthodes de renforcement moins coûteuses, plutôt qu'à des méthodes plus onéreuses pour chaque participant.*
- *Ils mettent la collectivité au courant de leurs premiers succès.*
- *Les messages apportent des preuves en respectant la hiérarchie suivante:*
  - *le comportement visé est à l'origine des problèmes;*
  - *la modification de ce comportement réglera les problèmes;*
  - *le changement s'applique à l'individu.*
- *Les messages doivent être rédigés en un langage simple et adapté aux participants.*

L'étude d'Everett Rogers sur la communication et le planning familial a relevé, dans les premiers programmes de planning familial, diverses erreurs qui peuvent se révéler particulièrement importantes pour les campagnes d'éducation au sujet du VIH. La première erreur est celle du « volume » : on suppose qu'un très grand nombre de messages donnera les résultats escomptés. La saturation en soi n'est cependant pas efficace, car les messages de piètre qualité ne sont pas pris en considération. La deuxième erreur est celle du recours excessif aux mass media modernes (radio et télévision), au détriment des moyens plus traditionnels et de la communication interpersonnelle. La troisième erreur est celle de l'hypothèse erronée selon laquelle des changements dans les connaissances et même dans les attitudes se traduiront inévitablement par des changements connexes dans les comportements en matière de contraception. Finalement, Rogers décrit le sophisme du message clinique, à savoir que ce sont les professionnels de la santé qui rédigent les messages fondamentaux et que les communicateurs se contentent ensuite de les « réemballer » sous une forme plus présentable et plus acceptable. Mais selon Rogers, pour être efficace, le fond même du message doit provenir de la collectivité.

On peut tirer d'autres leçons importantes du marketing des produits contraceptifs:

- *La publicité au sujet des condoms doit porter sur des marques de commerce particulières dès le début, même si une publicité générique peut aussi se révéler appropriée au cours de la même campagne.*
- *Il convient d'encourager un vaste éventail de détaillants, dans divers points de vente, à offrir des produits controversés comme les condoms.*
- *Il faut offrir toute une gamme de méthodes non médicales et de marques de commerce, à des prix différents, pour intéresser divers secteurs de la population.*
- *Il faut de solides aptitudes en gestion pour planifier et organiser des activités multiples, continues et complexes.*

Introduction

Prevention education has made significant contributions to controlling lifestyle health problems, such as child survival and heart disease prevention. Is there evidence that prevention education can make a similar contribution to the control of the HIV (human immunodeficiency virus) infection? Specifically, does acquired immunodeficiency syndrome (AIDS) education work? The question could not be more crucial or the answer more timely. What began as a medical curiosity just six short years ago has become an ominous threat to the health and safety of millions of people and scores of nations. The HIV that causes AIDS shakes the foundations of the most developed nations, while it promises to undermine decades of development in Third World countries as well. The public no longer questions whether HIV infection is a serious worldwide problem; the disruptive potential of AIDS is now an accepted fact. Experts

predict that 5-10 million people are now infected with HIV.

Debates concerning how to stop the spread of HIV infection rage through the halls of parliament and village councils. Often, questions are asked and policies are developed without the benefit of knowing what has worked in the past and what holds promise for the future. Few programs are evaluated fully, and often their potential effectiveness is constrained by inadequate funding or government disinterest. The pressure to "do something" is so great that public officials are tempted to take almost any action that appears to address the problem of HIV transmission, regardless of its potential impact.

AIDS education — how to prevent the spread of HIV infection through changes in human behaviour and in the social and political environment — is widely believed to be the only practical option, the only practical defense against AIDS at this time.

Policymakers and critics have begun to question whether massive investments in education will stop HIV transmission. Other policy options have been proposed as alternative means of AIDS prevention, including massive mandatory testing and isolation of infected individuals, international travel restrictions, closed borders, and expulsion of foreigners.

This part of the proposal is designed to summarize what is known to date about how education can help slow the transmission of HIV, to identify the problems of evaluation, and to suggest areas for critical research and investment in the future. It is limited to findings from a review of programs focused on the individual and HIV transmission. It does not present data on health-care providers, policymakers, or the media. This analysis looks primarily at campaigns for which some data exist, primarily in Europe and the United States of America (USA).

Lessons From AIDS Prevention Programs

AIDS Prevention Education: The Early Years

When AIDS was first detected in the USA in 1981, no one knew that those cases reflected the epidemic spread of a virus that began several years earlier. The first persons to be affected by the new virus were urban gay men. Feeling threatened by the new disease and often alienated from governmental health programs, gay men in the cities of Western nations began to see more and more of their friends become sick and die. They mobilized to inform, educate, and care for members of their own communities. Many of these community-based programs — usually begun by volunteers, often those with little or no training in health education — have since grown into multimillion-dollar health-promotion and AIDS-prevention agencies. Groups, such as the Gay Men's Health Crisis in New York, the San Francisco AIDS Foundation, the Terrence Higgins Trust in London, the Victorian AIDS Council in Sydney, and the Swiss AIDS Foundation, developed the early AIDS education programs, many of which are credited with the significant shift to lower-risk sexual activities by gay men.

The first indications of behaviour change and AIDS awareness came from indirect measures:

- the steady drop in the incidence of STDs (sexually transmitted diseases) in urban areas; and
- self-reported behaviour changes.

As public health officials and communities at risk recognized the seriousness of AIDS, studies were undertaken to determine whether gay and bisexual men had adopted the risk-reduction messages. These early studies often approached evaluation as a one-shot effort to complete a program rather than as a developmental, formative process that occurs during and after the program has ended. Few AIDS educators at the time recognized that evaluation was an educational tool in itself.

It is difficult to determine fully whether these AIDS education programs were, in themselves, responsible for the behaviour changes that did indeed occur. Some of the programs had an admitted sample bias; others were limited by inadequate funding, lack of staff and governmental support, the subjectivity of planners, and subjective interview questioning. At some point, survey participants may have second-guessed the socially approved answer to a question and inaccurately reported it as their own behaviour. All of these variables have an unknown impact on program effectiveness and study data. Finally, AIDS education programs — like other health promotion campaigns — do not exist in a vacuum. Mass media coverage of AIDS as news, rather than as specific educational programs, has multiplied. To date, there have been

no control groups to help separate the impact of media information, for example, from formal AIDS prevention campaigns, if indeed this is possible at all.

What is known beyond a doubt is that significant behaviour change did occur and was reported by many individuals during and after these early AIDS education programs were in operation. Researchers from major cities in Western nations have reported significant, although indirect, measures of behaviour change during the early 1980s. Several of these are highlighted in the following to illustrate the range of reported behaviour change and the significant drop in sexually transmitted diseases (STDs) that occurred once individuals responded to the threat of HIV infection.

These programs and results are quite specific for gay and bisexual men living in cities in Western nations. Neither the programs nor the results may be applicable to people at risk in non-Western cultures or in developing nations. A few innovative HIV prevention programs have been conducted in the developing countries of Africa, Asia and Latin America. These efforts also need to be analyzed, evaluated, and reported in the literature. The opportunity for developers of newer programs is to learn how certain assumptions, theories, and principles contributed to the success or failure of programs in Western cities. Even with all of these caveats, the changes reported suggested that targeted prevention messages can help individuals change high-risk behaviours that may spare them from HIV infection.

Direct Measures of Reduced Sexual Transmission

The primary goal of HIV prevention education has been to inform people about the spread of HIV and how to protect themselves and others from infection. During the first few years of the AIDS epidemic, only indirect measures reflected changes in behaviour patterns. Now that several years have passed since the first AIDS education campaigns were begun, it is possible to determine, in a limited manner, whether these efforts did slow the spread of HIV infection. Researchers and educators can study the rate of increase of infection, the number of new diagnoses, and the number of people who test positive for HIV antibodies at various intervals. These data provide the first indications of whether education can alter the spread of AIDS.

London. In a report from London (Weber et al. 1986), researchers determined the prevalence of HIV seropositivity among gay and bisexual men attending an STD clinic since 1982. The study showed that there had been a rapid rise in seropositivity prevalence during the period from 1982 to 1984 among gay and bisexual men (7.4% a year). This increase, however, was not sustained between 1984 and 1986 (dropping to 1.8% annually).

This apparent fall in the rate of new infections likely correlated with changes in sexual behaviour, as reported in the studies mentioned earlier. The researchers found reported evidence of behaviour change occurring over the same period. The number of partners declined, and there were trends toward safer sexual practices. Condom use increased, but not significantly, by the time of the study (the data were collected before the extensive AIDS prevention campaign in the London media this year).

Data also showed that exposure to sources of information about AIDS had coincided with a change to safer sexual practices. The main sources of AIDS information for these gay and bisexual men, according to self-reports, were STD clinic personnel, gay newspapers and magazines, and voluntary AIDS service organizations.

San Francisco. Two continuing studies in San Francisco have provided much of the basic data about the natural history of HIV infection and the effect of behaviour changes on HIV transmission. One of the studies, called the Clinic Study (Echenberg et al. 1985) is based on more than 6700 gay men recruited from clients at the city's STD clinic who donated blood in the late 1970s to assist in developing a hepatitis B vaccine. Many of these blood samples have been tested for the presence of HIV antibodies. The samples have since been matched with their donors to determine their past and current health and antibody status.

In the Clinic Study, seropositivity increased continuously from 4% in 1978 to 73% in 1985. During this period of rapid increase in seropositivity, extensive AIDS education campaigns began. Thus, some observers conclude that AIDS prevention education is ineffective. Others counter that the Clinic Study simply reveals that some individuals will need more specific and more

continually reinforced educational messages to curtail their possible exposure to HIV. Health educators recognize that some people respond more readily than others to cues for action.

The second San Francisco study provides an interesting contrast. The San Francisco Men's Health Study (SFMHS) (Winkelstein et al. 1986) recruited its cohort of gay and bisexual men by probability sampling from a 6 km^2 area where the AIDS epidemic has been most intense in the city. Thus, the men in this study were more likely to represent the at least 18,000 gay and bisexual men living in the study area. Among them, about 9000 were estimated to have been infected as of early 1986.

Prevalence of antibody to HIV in the SFMHS was determined during consecutive six-month intervals beginning in July 1984. Data were also obtained for the two years prior to the study from information collected during initial interviews. Prevalence of HIV increased from 23% in October 1982 to 51% in July to December 1985. (This compares with the continuous increase in the Clinic Study from 4% in 1978 to 73% in 1985.) In contrast, during the last 18 months of direct observation, the SFMHS noted only a slight increase in seropositivity.

Researchers for the SFMHS analyzed HIV seroconversion rates in three time intervals. Between July 1982 and December 1984, they estimated that the annual seroconversion rate was 18%. During the second and third six-month intervals, January through December 1985, the seroconversion rates had dropped to 5% and then to 3%. The researchers concluded that the best explanation for the declining seroconversion rates is the substantial reduction in numbers of unprotected sexual intercourse, although other factors, such as individual resistance to the virus, might have some impact.

Although the SFMHS study did not include an educational component, the data reflected behaviour changes that occurred during and after extensive educational campaigns in the city. In addition, the local and national media began to provide general coverage of AIDS on a more consistent and frequent basis during this time.

The London and San Francisco studies represent the first direct measures of the effectiveness of AIDS prevention campaigns. In other words, the effectiveness of AIDS prevention campaigns was indicated not only by indirect measures — decreasing STD rates and self-reported behaviour changes — but also by direct measures that show decreases in the rate of transmission of HIV.

Other Measures of Sexual Transmission Reduction

Kenya. In Nairobi, Kenya, an AIDS prevention program combining free condom distribution and education significantly increased condom use among female prostitutes (data presented at the Third International Conference on AIDS, June 1987, Washington, DC). The program started in 1985 with a series of public meetings discussing the risks of sexual transmission of HIV. Beginning in June 1986, a cohort of more than 200 prostitutes attending an STD clinic received intensive counselling, antibody testing, and free condoms. The women visited the clinic every two weeks for STD evaluation or treatment or both. They were told that they were at high risk for infection (if not already infected) and that they could infect their clients. Stopping prostitution was their best protection; the next best was to insist that their clients use condoms.

Before the inception of the education program, only 8% of the prostitutes had reported some condom use. By October 1986, five months after the program started, more than 85% of the prostitutes reported condom use. No difference was evident between seropositive and seronegative women in frequency of condom use. In addition, 73% of another group of prostitutes also reported using condoms. These women had not been extensively counselled but had received minimal education at the public meetings. These results suggest that the prostitutes were highly motivated to prevent transmission of HIV. Even minimal education, along with access to condoms, led to widespread adoption of safer sexual practices.

Uganda. In Uganda, an educational campaign has used the theme "love carefully" to increase knowledge of AIDS and to encourage use of condoms (data presented at the Third International Conference on AIDS, June 1987, Washington, DC). To evaluate the campaign's effectiveness and assess condom use, a survey was conducted in May 1987 in the Rakai District, where Uganda's greatest number of AIDS cases has occurred. According to A.M.T. Lwegaba, project manager, the survey found that

95% of respondents knew about AIDS, and 86% knew of at least two protective measures. Use was greatest among barmaids, health workers, traders, and students and lowest among agricultural workers. Unfortunately, no precampaign survey was conducted. From 1985 to 1987, about 100,000 condoms were distributed in the Rakai District and the neighbouring Masaka District. Although researchers say that knowledge and use of condoms is apparently increasing, many survey respondents did not like to use them because they make sex "cumbersome," interfere with pleasure, remain in the vagina, or they are not always available.

New York City. According to New York City Health Department statistics (Centres for Disease Control: Declining Rates of Rectal and Pharyngeal Gonorrhea Among Males, New York City), gonorrhoea rates among men aged 15-44 years in the city dropped from 129 new cases per 100,000 in 1980 to 74 cases per 100,000 in 1983. In contrast, gonorrhoea rates among women *increased* during the same time period.

An extensive study (Martin 1987) found that gay men's sexual behaviour had changed in a direction that was consistent with medical advice about AIDS prevention. In May of 1984, data revealed that significant changes had occurred during the previous 18 months in all behaviours considered to be high risk. Gay men reported that they were having less sex outside their long-term relationships, fewer numbers of sexual partners, and a lower frequency of high-risk sex with secondary or anonymous contacts. The number of specific sexual acts, as well as the overall level of sexual activity, had diminished. This study, begun in November 1983 among 655 gay men, asked research participants to compare current sexual activities with their behaviour during the previous year. The researchers also conducted follow-up surveys among the same men in May 1984 and again in November 1984. The average number of sexual partners in the previous month dropped from 5.9 in November 1982 to 4.8 in November 1983, 3.9 in May 1984, and to 2.5 in November 1984.

The percentage of those surveyed who engaged in any unsafe sex with a new partner was 47% in November 1982 and 1983 and then dropped to 29% and 27% in May 1984 and November 1984, respectively. In addition, the average number of total unsafe sex acts in the previous month progressively dropped from 4.8 to 3.9 to 1.8 to finally 0.8 in the four time periods of the study.

In September 1984, the San Francisco AIDS Foundation commissioned a random-sample telephone survey of 500 gay and bisexual men recruited from all parts of the city. The data indicated that these men had made major changes in their sexual behaviour in response to AIDS. The study (Puckett et al. 1985) revealed that more than two-thirds of the sample had effectively removed themselves from any serious risk of spreading or contracting AIDS. Other data from the study indicated that the general media, gay publications, and specific AIDS prevention materials had a decided impact on the changes in behaviour.

Chicago. A study conducted in 1982-83 found that gay men significantly changed their practices; for example, the amount of unprotected receptive anal sex fell by 77%, and unprotected oral sex with swallowing semen dropped 88%. These percentages compare with a general *increase* in sexual activity among gay men during the period 1978-79, before AIDS was identified.

Houston. Houston developed and implemented one of the first and most aggressive AIDS risk-reduction campaigns. Initiated in early 1982, the program consisted of a three-year plan of awareness education and group behaviour modification using educational, psychological, and public relations strategies. Each year, attitudinal and behaviour changes were measured (data presented at the Second International Conference on AIDS, June 1986, Paris). Changes were documented each year, culminating in a significant shift at the end of year three to safer forms of sex. Such changes in sexual behaviour correlate directly with a dramatic three-year decrease in STDs in the city's gay population.

Denver. A questionnaire answered by 1092 consecutive patients attending the city's major STD clinic revealed a greater change among gay men in the number of sexual partners after learning about AIDS than among heterosexual men and women after receiving the same information. This suggests the difficulty of changing behaviour in those who are at risk but do not consider themselves to be at risk. Similar questionnaires conducted over three successive years beginning in 1983 found that gay

and bisexual men had decreased their number of partners by 40-50% in each of the three years.

Los Angeles. The Los Angeles Men's Health Study, conducted for the AIDS Project/Los Angeles in January 1986, polled about 4900 gay men about their sexual practices. In addition to reporting having had fewer sexual partners during the previous 30 days, a significant majority of participants agreed with the statement: "It is my responsibility to avoid transmitting the virus to others."

London. At an STD clinic in London, during the first six months of 1986, 24% of the men who visited the centre with an STD were gay, compared with 31% for the first six months of 1983. This number represents a decrease of almost one-quarter.

Male rectal gonorrhoea cases fell by 53% over the same period (Gellan and Ison 1986). The researchers commented: "We cannot say from these figures that fear of AIDS is a major factor in homosexuals, but we can see no other obvious reason for so striking a fall over such a short period."

Further evidence of such change can be found in the falling rate of gonorrhoea in gay men in London (a fall from 15.3% to 5.1% among gay and bisexual men). The gonorrhoea rates fell in this clinic during the second half of 1983, a time of intense media coverage regarding AIDS (Weller et al. 1984).

Stockholm. Educators in Stockholm noted that during the 1970s there was a gradual increase in cases of syphilis among gay and bisexual men in many major Swedish cities. The first case of AIDS in Sweden was reported at the end of 1982; it was soon followed by the establishment of educational programs aimed at limiting the spread of HIV. During 1983, a campaign was started that focused on reducing the number of sexual partners and on encouraging safer sex among gay men.

Indirect evidence of program efficacy (data presented at the Third International Conference on AIDS, June 1987, Washington, DC), such as interviews, revealed that major behavioural changes in sexual practices may have taken place since the educational efforts began. The average number of sexual partners appears to have fallen sharply, and major changes in sexual practices had ensued, including more use of condoms. Changes similar to those noted in these studies have been reported in cities in the USA and several in Europe, such as Amsterdam, Berlin, Brussels, Copenhagen, Frankfurt and Zurich.

Limitations of Other Measures. The sharp declines in certain STDs are useful indicators of the effect of education on the sexual activities of populations at risk, yet there are limits to the usefulness of these data as markers of HIV prevention. First, AIDS has a long incubation period and, as such, it is not yet possible to obtain direct assessments of the efficacy of the preventive measures. Second, a reduction of sexual activity can affect the incidence of STDs that are bacterial in origin, as shown by these many studies, yet the impact may be different for STDs that are viral in origin, namely HIV and hepatitis B.

Syphilis and gonorrhoea have a period of greatest infectiousness within several weeks after initial exposure; after that period, there is a rapid decline in infectiousness. Thus, an individual with an initial infection of syphilis or gonorrhoea may reduce the amount of sexual activity and significantly lessen the chances that the particular STD will spread. However, someone with HIV infection is believed to remain consistently infectious, probably for a lifetime, and may in fact become increasingly infectious. Thus, a reduction in sexual activity for an HIV-infected person may reduce the overall number of partners that may become infected, but each partner has a good chance of HIV exposure during unprotected sex.

The Minnesota Department of Health has reported that since its first reported case of AIDS in 1982 to the present, every six-month period sees the same number of new clinical cases of hepatitis B in gay and bisexual men. They note, however, that the same four-year period saw a 70% decline in the rate of syphilis. The San Francisco studies show an overall decline of 70% of rectal gonorrhoea from 1980 through to 1985, but a different group of men from the same STD clinic during the same period of time sustained an increase in HIV seropositivity from 12 to 67%.

A reduction in the rate of new HIV infections does not necessarily accompany behavioural change. In a New York group of men, the incidence of HIV infection did not change between 1979 and 1984 (Stevens et al. 1986). Perhaps changes in behaviour, offset by the increasing risk of acquiring the virus from any one partner, increases with rising

prevalence in a given geographic area.

A further caveat on extending these study findings to other populations is that gay men in urban areas are often well-educated, in close contact with an active community of gay men, and easily accessible to mass media and community organizational efforts. Thus, their ability to receive, understand, and act on specific messages about AIDS prevention is likely to be far greater than the ability of uneducated, disorganized, or widely dispersed individuals, such as IV drug users, prostitutes, migrants, female partners of bisexual men, of men with multiple partners, or men and women in some developing countries. One should note, for example, that immunization programs in developed countries often achieve close to 100% coverage, but developing countries often have difficulty reaching 50% levels, although immunization programs — unlike AIDS prevention — are not controversial and have political support of government officials.

Although some observers, already sceptical of the efficacy of AIDS education, will concede that risk-reduction programs may affect the incidence of STDs in some areas, they may assert that there remains no proof that such programs significantly lessen the spread of HIV in totally different environments. A careful assessment, however, leads to several tentative conclusions about the effects of education among these specific populations of gay men that:

- Risk-reduction programs can have a significant impact on reducing the prevalence of STDs, an important factor in the public health of developed and developing nations;
- Messages that emphasize simply reducing the number of partners and frequency of sexual activity will have considerable effect on many STDs but may have only limited impact on HIV transmission;
- HIV prevention messages that specifically advise the use of condoms during all sexual intercourse (oral and anal), plus the substitution of even safer activities, have a much greater chance of significantly slowing the spread of HIV than messages encouraging only the reduction of the number of sexual partners and the frequency of sexual activity; and
- Despite extensive knowledge about HIV transmission a significant subgroup of individuals will continue to practice risk behaviour. These individuals require more support and directed behaviour modification programs.

Education For Other Population Groups

The studies discussed in the foregoing primarily, and sometimes exclusively, assessed behavioural changes among gay and bisexual men. Obviously, HIV prevention programs must target other population groups as well, especially in countries where heterosexual contact is the major route of HIV transmission. A few research studies, based primarily on indirect measures, have looked at prevention of HIV transmission among heterosexuals, IV drug users, young adults, and haemophiliacs in Western nations.

San Francisco. Before developing a special AIDS education program for heterosexuals, the San Francisco AIDS Foundation and the city's health department commissioned a survey of attitudes among sexually active heterosexuals (reported by the San Francisco AIDS Foundation, 1987). The survey was conducted in mid-1986, a time when the city had received for several months almost daily news reports and feature stories about AIDS, the means of transmission, and the seriousness of the problem. In addition, general AIDS information campaigns had been conducted in the city during the previous years. The survey was not meant to measure the effect of a special educational effort but rather to assess the level of knowledge, the sense of personal risk, and the awareness of prevention among the city's heterosexual population.

Four-hundred sexually active adult San Franciscans, who described themselves as heterosexual, were recruited by a random sampling process to participate in the telephone survey. A total of 99% of the men and 96% of the women in the study disclosed that they had had more than one sex partner during the previous year. The men reported having sex with at least five women, and the women said they had sex with more than four men during the past year. Fifteen percent of the men and 10% of the women said they had from 10 to more than 20 partners of the opposite sex during the previous year. Three percent of both the men and the women believed that they had had sex with a partner who was an intravenous drug user. Whereas 7% of the men said they had had sex with

a prostitute during the previous 12 months, 8% of the women reported having had sex during that time with at least one man they knew to be gay or bisexual. Eight percent said they had used drugs intravenously.

The researchers for this study estimated that nearly 40% of the participants had been at high or medium risk for HIV infection because of their sexual activities. On the basis of these data, the San Francisco AIDS Foundation estimated that at least 100,000 heterosexuals in the city may be risking HIV infection through sexual activity.

A majority of both the men and the women in this study were generally well-informed about how HIV is transmitted. Nevertheless, two-thirds of the participants said they felt no personal risk of contracting AIDS and that they saw no reason to discontinue high-risk activities, such as vaginal intercourse or oral sex without the use of condoms.

The results of the San Francisco survey highlight the problems with targeting HIV prevention messages mostly to one group (in this case, gay and bisexual men). This bias of federal health officials and the media who, until quite recently, characterized AIDS as a threat only to gay, white males, in effect, a "gay plague." As a result, other individuals — heterosexuals and people of colour — do not perceive themselves to be at risk. During this time, elected federal officials did not discuss AIDS publicly, thereby giving it little status as an important threat to the public health. Further, in San Francisco the incidence of AIDS diagnoses is concentrated heavily among the gay population. Thus, few heterosexuals had experienced AIDS personally. As a few studies among gay men have noted, until an individual knew someone with AIDS, the threat remained abstract and impersonal.

A study among 72 heterosexual couples in Miami (Fischl et al. 1987) in which one partner had AIDS and the other was healthy revealed that knowledge about infectivity and transmission of HIV does not guarantee that individuals will protect themselves. During the course of the study, 17 of the 47 spouses who were HIV antibody negative at enrolment developed antibodies during the course of the study as a result of vaginal intercourse without the consistent use of condoms. As a result, a large percentage of previously uninfected partners became infected themselves and later developed immunological signs of impaired immune systems.

Heterosexuals - United Kingdom. Earlier this year the British government began an ambitious, US $39 million nationwide campaign to teach the country that AIDS is spreading in Britain and that it is a fatal disease with no known cure. The campaign employed advertising on radio and television and involved sending information leaflets to each of the country's 23 million households. Huge billboards in nearly every town warned passers-by with the message "AIDS: Don't Die of Ignorance." The campaign also sponsored a special *AIDS Week* on national television in which all stations ran AIDS information programs two hours a night every evening.

The British public media campaign was based on the belief that such efforts could influence the degree of awareness and knowledge of aids and change attitudes and behaviour. To accomplish these goals, health officials and media experts attempted to pierce the denial that heterosexuals admitted in the San Francisco survey. The message in London was simply, "You, as a normal, everyday person, could get it."

Health officials who developed the high-profile media campaign have instituted a regular sampling of public opinion about AIDS to determine whether attitudes and behaviours have changed (data presented at the Third International Conference on AIDS, June 1987, Washington, DC). In interviews of 1000 individuals, researchers found that 98% knew that HIV could be spread sexually; similarly high percentages knew that HIV could be spread through sharing IV needles. A total of 89%, however, still believed that HIV could still be transmitted through blood transfusions, and 37% believed they could be exposed to HIV from giving blood.

Fears about casual contact with HIV-infected individuals dropped as a result of the extensive campaign. Of the 1000 interviewed individuals, fears of kissing dropped from 14 to 7%, fears of sneezing dropped from 9 to 4%, and fears of sharing drinking glasses from 13 to 6%. The campaign resulted in a substantial increase in knowledge that risk can be reduced by not being promiscuous to a total of 93%. Researchers also noted a 24% increase in awareness about the effectiveness of condoms.

Although the changes in knowledge and attitude were significant, success in prompting changes in behaviour was more limited. The average number of partners among heterosexual adult

Britons remained the same throughout the education campaign. Use of condoms among heterosexuals (who had not been a target audience) also remained the same at 18%. In contrast, among gay respondents, 64% said they had reduced the number of sexual partners, 37% said they used condoms more often, 42% reduced anal sex, and 60% reported less casual sex. Further, one-third of the gay men said that they knew someone who is HIV antibody positive.

Overall analysis of the campaign's effectiveness indicated that, although there was significant change in awareness of the seriousness of AIDS and in attitudes about how HIV is transmitted, the British public was more resistant to making changes in behaviour. No evidence existed of change in heterosexual behaviour, although a majority of gay men reported a significant shift from high-risk sexual activities to low-risk practices. Nevertheless, among both heterosexuals and gay men, the researchers concluded that there remained a high number of unprotected sex acts, thereby making the population vulnerable to HIV infection.

Both the San Francisco survey and the British campaign reinforce the basic principle of health promotion that information alone is inadequate to change behaviour. Even with its mixed success, the British campaign can be credited with a number of other important achievements.

First, public awareness of the seriousness of AIDS was considerably reinforced by the government's commitment of time, money, and resources to the media campaign. Other governments that fail to address the problem of AIDS send an implicit message to their citizens that AIDS is not a serious concern. In this regard, the British government has set an example for leaders of both developed and developing nations.

Second, the British campaign involved a multifaceted approach to getting the word out. Television and radio programs and advertising, billboards, newspaper advertising, media news stories, leaflets to every household, and the visit to a hospital AIDS ward by the Princess of Wales all helped create an environment in which AIDS awareness, knowledge, and behaviour change were encouraged and reinforced throughout society. This type of comprehensive campaign comes close to achieving what health educators believe is the ideal approach to health promotion and disease prevention.

Third, the British campaign took AIDS prevention education outside the traditional realm of health departments. AIDS is not like other diseases either in developed or developing nations, and traditional health strategies are insufficient to match the social, political, psychological, and economic complexity of HIV-related diseases. Even smoking, teenage pregnancy, malnutrition, heart disease, and cancer prevention face fewer challengers than does control of HIV transmission. Yet, the unchecked spread of HIV will complicate and worsen each of these and other vital health promotion and disease prevention concerns.

Fourth, the media campaign conducted evaluations throughout the education effort rather than waiting to perform an evaluation at the conclusion of the program. Unfortunately, the prevention campaign did not involve significant input from established health education councils and existing AIDS service organizations. That involvement could have enhanced the prevention program and increased public support for its objectives.

Needle-sharing Intravenous Drug Use. The social profile for intravenous (IV) drug users includes isolation, limited education, and, frequently, criminal status — all factors that make outreach to them difficult. Yet the need for risk-reduction education to this population could not be more immediate. A recent report from San Francisco (Chaisson et al. 1987) suggests that IV drug users in areas of the USA outside the Northeast (New York and New Jersey) may not have such high rates of HIV infection and, thus, public health interventions may still be able to prevent the rapid spread of HIV in these low-prevalence areas. The situation is similar in some other countries. For example, in the UK the rates of antibody positivity among drug users is very high (51%) in Edinburgh and it is relatively low (5%) in London and Glasgow (Mortimer et al. 1985). Epidemiologists warn, however, that the potential for further spread of HIV is obvious and that education and creative public health measures must be taken today to prevent HIV infections and AIDS during the next decade.

Drug counsellors estimate that more than 70% of the drug users are not in treatment at any one time. Proposed interventions to reach these drug users include:

- Recruitment of reformed drug abusers as peer

counsellors to educate drug users;
- Expansion of drug treatment programs, both in scope and number of openings for new clients;
- Risk reduction by informing users how to clean their needles and by initiating a needle-exchange program; and
- Risk reduction by informing users how to avoid sexual transmission of HIV.

Few evaluations of risk-education campaigns among IV drug users have been undertaken. One survey of drug users in Sacramento, California (Flynn et al. 1986), revealed that this group shared a predominant trait with other populations at risk: awareness of AIDS and its transmission did not necessarily lead to behaviour changes that would block the spread of HIV. Counsellors interviewed 150 IV drug users enroled in treatment programs to determine their knowledge of HIV transmission and their own personal drug-using behaviours. The surveys revealed the following:
- About 90% believed that HIV was present in some IV drug users in Sacramento;
- A total of 93% believed they would eventually contract HIV and AIDS through needle-sharing;
- A total of 95% wanted to avoid acquiring AIDS;
- A total of 91% believed HIV could be spread heterosexually; and
- About 64% believed condoms could prevent the spread of HIV.

Survey respondents said that 77% of the time they shared their needles with someone else before or after they shot up; 87% of the time they cleaned their equipment between use, but the cleaning most often entailed a rinse with only water. Of the respondents, 76% had shared needles 1-10 times during the last month; the remaining 33% shared equipment even more often.

The Sacramento study documented that local IV drug users possessed reasonably accurate information about HIV infection and transmission. Knowing about AIDS, however, did not have an impact on their high-risk behaviour possibly because they had no access to either clean needles or equipment needed to sterilize needles.

In San Francisco, for example, addicts are reported disinfecting their needles with household bleach, which is being distributed along with instructions for use with needles in areas where drug use is common. In Italy, concern regarding AIDS may have been the reason for a decline in cases of hepatitis B hospital admissions among drug addicts in 1986 as well as an increase in the number of addicts seeking treatment at methadone detoxification programs. Although some drug users are changing their high-risk behaviour regarding needle use, no indication exists that they are changing their high-risk sexual practices. These findings underscore the importance of addressing multiple-risk factors in communication messages.

Amsterdam. Officials in Amsterdam instituted three measures (data presented at the Third International Conference on AIDS, June 1987, Washington, DC) to prevent the spread of HIV among IV drug users in the city: a publicity campaign, an exchange program for needles and syringes, and the distribution of condoms among addicted prostitutes. The publicity effort involved distributing leaflets and holding informational meetings for drug counsellors and drug users. The more ambitious and controversial measure has been the exchange of syringes and needles, a program begun in 1984 by the Municipal Health Service, with the cooperation of the Association of Drug Addicts. In 1985, some 100,000 syringes and needles were provided. In addition, drug users were contacted through street outreach, medical assistance to arrested addicts, contact with hospitalized addicts, and community-based, low-profile methadone treatment programs.

Through these efforts, 60-80% of Amsterdam's drug addicts had been contacted by 1985. Even with the needle exchange program, city health officials noted that the number of addicts using IV drugs did not increase in 1985; in fact, the number of addicts stabilized over the past few years. Whether or not these interventions will block the spread of HIV among Amsterdam's IV drug users will be determined by an evaluation of the program currently underway. Two elements of the Amsterdam program deserve special attention.

First, members of the target group, drug addicts themselves, were involved in developing and executing the educational interventions. Although the value of their participation was not tested with a control group, extensive anecdotal reports from this and several other HIV prevention programs attest to the importance of working with the people at risk and involving them in the process.

Second, health authorities urged IV drug users to stabilize their life-styles and living conditions through regular methadone use, less

involvement in illegal activities, regular medical check-ups, and attention to social circumstances (housing, money, and "normal" social relationships). The Dutch officials had the foresight to realize that attention to the IV drug user's life circumstances was as important as an emphasis on the specific HIV high-risk activity. This approach to the total environment of the individual at risk presents governmental officials with considerable challenges. People who are unemployed, poverty-stricken, homeless, and suffering from malnutrition are unlikely to respond to HIV risk-reduction messages or to feel they can control their futures. For them, day-to-day survival is a more immediate challenge. Health promotion experts advise that some alleviation of these conditions must occur to enable people at risk to heed disease prevention messages.

Baltimore. The Health Education Resource Organization (HERO) of Baltimore developed a street outreach program and a model project to demonstrate that peer education can help drug users reduce their high-risk activities. Preliminary reports (data and report presented at the Third International Conference on AIDS, June 1987, Washington, DC) from an evaluation conducted with Harvard University revealed that, several weeks after an educational intervention, drug users reported an increased level of AIDS awareness and a decreased level of high-risk drug using and sexual activity.

Measurement Issues

Given the sobering fact that no consistently effective treatment, cure, or vaccine for HIV-related disease exists, educational interventions offer the only means to halt the spread of HIV throughout populations at risk. Formative and summative evaluations provide opportunities to determine whether the interventions achieve their objectives, but the evaluation process itself is often beset with theoretical and practical problems.

When public officials question whether AIDS education works, they often implicitly hold up the "medical model" as a standard. Yet there are many reasons that the medical model does not apply to health education in general and HIV prevention programs in particular. The medical model relies heavily on relatively controlled circumstances; for example, testing a new drug on a cell line in the laboratory and comparing it with an old drug in the same cell line, or giving some patients a pill and some a placebo and observing the results. Yet this approach is difficult to apply to educational interventions; education does not occur in a vacuum and cannot be conducted in vitro. Modifying behaviour is never an isolated endeavour; every action influences every other action.

Educational messages directed to specific populations or the general public are just a few of the many variables that influence personal behaviour every day. For example, the current condom use campaign in the USA vies for attention with admonitions by some church leaders and citizen groups that condom use is an unreliable way to stop the spread of AIDS; the campaign must counter innumerable television programs that extol frequent, casual sex without the benefits of condoms, and it must seek to overcome relevance on the part of many men to use condoms.

At the same time, the condom campaign struggled against almost insurmountable barriers in the USA until the US Surgeon General began to advocate their use to prevent HIV infection. In short order, congressional committees considered whether television networks should broadcast condom commercials, some media changed long-standing policies against condom advertising, school boards inadvertently educated themselves about AIDS while formulating new sex education policies, and the news media began to ask national leaders about their positions on AIDS education. What were at first isolated public health campaigns suddenly became a national dialogue, and information about AIDS reached many more people.

To obtain a meaningful answer to the question "Does AIDS education work?" public officials and others must attempt to understand the concurrent variables that may have enhanced or undermined the influence of an HIV prevention message. Health educators must develop health promotion and disease prevention messages that will benefit from other complementary influences in society while they counteract the contradictory messages people may receive from other sources. For example, telling youth that using a condom today ensures that they can become parents in the future takes advantage of their desire to have children, while not denying the possibility of sexual gratification at present.

As with the use of the medical model, expectations that health promotion should follow

the patterns of commercial product promotion also are mistaken. Within the business context, a narrow set of clearly defined goals (for example, increased sales and profits) is selected, and results are evaluated by standard performance criteria. As a result, simple comparisons among programs can be made. Health researchers have been unable to agree on a similar set of evaluation criteria for health promotion programs. As a result, such programs are open to criticism no matter what results occur.

In addition, health researchers note that health education programs are often unfairly held to the high standards of success expected and frequently achieved in diagnosis and therapy (as observed in the medical arena) or in effective commercial campaigns. Applied to HIV prevention, public officials might expect rather immediate declines in rates of seroconversion in the population, whereas a more realistic result might be indirect reports of changed behaviour over a period of time, gradually yielding lowered HIV prevalence in a community.

As observed in the extensive campaigns in the UK, mass media are being employed as a means for reaching a large, sometimes national, audience with basic HIV prevention messages. Subsequent evaluation of media programs frequently revolves around the effectiveness of marketing approaches in health promotion efforts. Several factors will likely influence the success of these marketing efforts:

- The attitudes of health-care professionals toward marketing as an effective tool for disseminating HIV risk-reduction messages;
- The attitudes of other individuals (that is, policymakers, business people, and community groups) toward the use of marketing in this manner;
- The attitudes of health-care professionals and others toward preventive care;
- The temptation to mandate more dramatic high-profile interventions (quarantine and continuing screening of tourists and immigrants) instead of extensive continuing education efforts;
- Expectations for early, quick results; and
- The target population's access to the media.

As noted earlier, most current HIV prevention campaigns assume that responsibility for stopping the spread of AIDS rests with the individual. Making the individual the responsible party for HIV transmission can easily feed the phenomenon of blaming the victim. Control of the HIV epidemic greatly depends on the cooperation of individuals at risk — as subjects of research, experimental treatments, vaccine development, and prevention education. Alienating those people most needed for successful programs will undermine effectiveness.

Evaluation of HIV interventions can provide the most useful information if such studies fully appraise all circumstances that may affect program effectiveness. For example, with the increasingly widespread use of the HIV antibody test, researchers are currently studying how knowledge of antibody status affects behavioural change. Many of these studies use indirect measures of change (self-reported behavioural change). Although some may use direct measures (seroconversion rates), few of the studies have taken a more comprehensive view and evaluate whether other events coincided with receiving the antibody test result to prompt change of behaviour. Further, the extent and nature of counselling provided, along with testing, needs to be assessed thoroughly.

In a similar manner, an HIV risk-reduction campaign that advocates condom use will likely achieve a different degree of success in a country that already accepts the idea of birth control than it would in a nation that has moral and social beliefs discouraging birth control. An evaluation of such a prevention program would be remiss if it failed to evaluate results within the greater societal context.

One of the reasons the extensive campaign in the UK received such media attention around the world is because it represented a dramatic shift in governmental policy. A period of limited governmental attention was suddenly replaced by a saturation of information. One is left to wonder what the effectiveness might be of a long-term, extensive campaign that has the support of both government and social institutions. The polio epidemic earlier in this century is an example of how societal consensus can affect widespread awareness, prevention, and treatment.

These problems inherent in the evaluation process are important considerations when educators and policymakers ask, "Does AIDS education work?" Research data accumulated from several sources suggest that education has played an important role in the public's awareness of AIDS. Both direct and indirect measures reveal that changes in attitudes, beliefs, and behaviours have occurred over time as the general public and populations at risk have

responded to the threat of HIV infection.

Those who question the effectiveness of AIDS education should carefully consider their expectations for successful programs. After recognizing the potential of prevention campaigns for halting the spread of HIV, policymakers and health officials could more appropriately move to the more important questions: "Which AIDS education programs work best?" and "How can changes in the environment help prevent HIV transmission?"

Lessons from the Analysis of Existing National AIDS Plans

For this proposal, we have reviewed a number of documents related to governmental campaigns to control AIDS. We have been especially interested, however, in the communications component of AIDS control programs in Africa, because Africa is where the prevalence of HIV is highest and where prevention programs are most urgently needed. Although AIDS control programs are just getting underway in Africa, we were fortunate in obtaining AIDS control-planning documents from five African countries.

Although each program is unique, they have at least one thing in common: in each case, public health communication is the least-developed program component. We hasten to add, however, that this is also true of many more developed countries around the world — the USA for example, has yet to arrive at any consensus on a national health communication program on AIDS.

We believe this lack of a communication strategy in many programs throughout the world is the result of several factors. First, AIDS education is not well understood and secondly it is highly sensitive both socially and politically. AIDSCOM is designed to help overcome these two constraints. It is addressed not only at answering specific behavioural questions but also at using those answers to strengthen a national AIDS control policy.

In this portion of the proposal, we point to some gaps in planning AIDS control programs (recognizing that the plans we reviewed are only preliminary) and suggest some specific ways in which planning for an AIDS education campaign can be strengthened.

Planning Objectives

Three of the documents reviewed were fairly lengthy plans developed by ministries of health or national AIDS committees. These plans list objectives in three areas: current epidemiology and surveillance of the AIDS epidemic, prevention of the spread of HIV infection, and improvements in laboratory and clinical management capabilities. Typical of these is the plan from one African country in which the objectives of the AIDS control program are to:

- Assess the current status of the epidemic;
- Monitor progress of the epidemic;
- Prevent the spread of HIV by sexual transmission;
- Prevent the spread of HIV infection by either blood transfusion or contact with contaminated blood products;
- Prevent the spread of HIV infection by use of contaminated needles or other skin-piercing equipment;
- Prevent the spread of HIV infection from infected mother to child;
- Improve clinical management; and
- Develop and coordinate research activities.

We are concerned here only with how the plans currently address the prevention objectives because a public education campaign cannot be used effectively to accomplish either surveillance or clinical management objectives.

Planning Communication Strategies

In some of the more developed plans reviewed, each prevention objective is followed by a number of strategies. In a typical plan, for example, the strategies for preventing sexual transmission of HIV are to:

- Limit the number of sexual partners;
- Promote the use of condoms in specific target groups; and
- Promote early diagnosis and effective treatment of other STDs.

Activities listed for carrying out the first strategy are to:

- Define the target groups;
- Assess the current situation (market research);
- Define content of message;
- Define appropriate channels for delivery of message; and

- Evaluate the health education program continuously.

How these activities lead to an actual communication campaign — and how the campaign itself is to be implemented — is not specified, however. Overall goals are well defined, but communication strategies and tactics are not. In short, no separate communication plan has been developed for the public education component of the AIDS prevention programs. In addition, many plans do reflect the need to segment audience, most often around specific "risk groups." Although segmentation is one fundamental step toward success, "risk behaviour" may not be the only, or even the most salient, segmentation factor.

The integration of various strategies seems weak in many of these early plans. Again, this situation reflects on our lack of experience with AIDS education but suggests another area of important focus. National campaigns using mass media are simply not enough. Interpersonal networks will also have to be activated throughout society.

Finally, when condoms are mentioned, there is little realization of the need to "market" them — select product characteristics, position them in the consumer's mind, open new channels of distribution, and price them at the optimal cost to maximize use. Condom give-aways or self-marketing based on fear of AIDS will not be enough to ensure proper and regular use.

We suggest, therefore, that a separate communication plan be developed as one of the first steps in designing governmental AIDS control programs, for several reasons:

- First, it would provide a framework not only for carrying out the short-term objectives of the program but also for adjusting the campaign's message and distribution strategies over time.
- Second, it would help campaign sponsors allocate resources to and focus messages on those audiences most ready to act on the message — extremely important in an AIDS campaign where resistance and denial may make it difficult to effect the desired change in attitude or behaviour among certain audiences.
- Third, developing such a plan encourages campaign sponsors to investigate how all available communication resources — media, interpersonal, and institutional — can be used to spread and reinforce the campaign's message.

Recommendations

In general, any national programs for AIDS control would benefit by the addition of a well-developed and actionable communication component that does the following:

- Describes the environment — medical, social, psychological, and institutional — in which the AIDS campaign must be waged. This approach would enable planners to consider some of the issues that the AIDS communication program must address.
- Outlines the information needs of the campaign to help guide the conduct and use of formative market research. Research on public knowledge, attitudes, and practices will be used by campaign planners to select target audiences and formulate appropriate message strategies. Audience segmentation raises some of the most difficult issues in an AIDS prevention campaign, such as how to focus a campaign on high-risk behaviours rather than on high-risk groups and how to allocate limited resources for those audiences whose readiness to accept the AIDS-related message will result in a more effective campaign.

  In some programs, it appears that a "high-risk" group has already been preselected as the target audience without the benefit of research or that numerous audiences will be the focus of the campaign. For example, radically different message strategies would be needed to carry out a campaign that targets audiences as disparate as school children, army personnel, and HIV-infected persons, as was suggested in one country's plan.
- Describes specific research objectives, such as: (a) identification of sexual practices and attitudes toward them; (b) identification of either myths or misconceptions about transmission of AIDS; (c) identification of either cultural or social stigmas associated with AIDS patients; (d) primary "influentials" of primary target audience(s); and (e) credibility of different sources of information concerning AIDS (government, health-care workers, peer groups, and church).

  With this information, as well as epidemiological data, planners can then describe in the communication strategy realistic objectives, primary and secondary target audiences, and the barriers and opportunities facing the program.
- Set forth communication objectives for the

program. For example, most of the plans list "decrease sexual transmission" as a primary objective of the campaign. To be able to evaluate the campaign, the plan should define more precisely "how much," or "how many." A more quantifiable objective might be to "decrease the rate of sexual transmission of HIV in the general population by 50% in one month;" or "decrease HIV transmission from prostitutes by 80% in six months."

- Identifies specific communication strategies. Most of the plans do not contain communication strategies, that is, methods of accomplishing the program objective through some type of mass media, interpersonal, product marketing, or behaviour-modification means.

  Communication strategies are based on research on the target audience, the media available, and other barriers and opportunities. Depending on such factors, strategies to reach the objective or to reduce the sexual transmission of HIV could be as varied as: (a) "use mass media to dispel widespread myths on how AIDS is transmitted;" (b) "encourage the use of condoms among sexually active women;" (c) "promote the advantages of staying with one, uninfected partner among married males;" and (d) "provide health-care workers in urban STD clinics with information on how to counsel male STD patients regarding the risk of AIDS."
- Analyzes communication channels. Before developing messages and materials, campaign sponsors need to think through how the messages will be delivered. Such an analysis could include not only which mass media and interpersonal networks would be appropriate but also how to influence gatekeepers of each channel, how messages need to be geared for each channel, and what type of evaluation measures can be used for each channel.

  Campaign sponsors may wish to investigate how governmental organizations, religious and social organizations, media organizations, private business, unions, and health-care institutions could be used as communication and materials distribution channels.
- Provides for the development of a formal communication strategy. Once the activities mentioned are completed, campaign sponsors should formalize the direction of the campaign by writing a communication strategy. None of the plans reviewed spoke of the necessity for a formal document that specifies the objectives, intended audience, opportunities and barriers, strategies, messages, and distribution channels for the communication component of the AIDS control program.
- Plans for institutionalizing coordination of epidemiological and market research. Throughout the campaign, health educators should have a mechanism for obtaining, verifying, and reviewing epidemiological data. Such a mechanism serves both to ensure that health messages are focused on the areas of greatest need and to ensure support for the campaign from the medical community.

  It was unclear from the plans reviewed that such a mechanism would be part of the structure of national AIDS committees. It is vital, however, that such a mechanism be in place even for a short-term plan, so that from the beginning the campaign is coordinated with the completion of epidemiological surveys and messages can be refined according to changes in the data.
- Describes how the professional and public information campaigns would be coordinated. Although the more developed plans call for both public and professional education to prevent the spread of AIDS, it was unclear in some plans how the National AIDS Committee would coordinate the messages and timing of the two campaigns. Such coordination could begin with input from health-care workers on the communication strategies, using their experience in the field as a basis for developing communication strategies and messages.

  Again, such coordination would help to reinforce the public message by providing another channel through which the message is delivered. It would also ensure that health-care workers are receptive to requests for information from the public. For example, if one strategy is to encourage the use of condoms, health-care workers should be willing to dispense condoms and able to provide needed information on their use as an AIDS prophylactic.
- Presents a process for establishing medium- and long-range objectives for AIDS control. The communication plan should provide a framework for integrating changes in the "environment" in which the AIDS campaign must operate. Although it need not establish procedures for,

say, reviewing epidemiological data, the plan should set forth communications issues that need to be addressed as epidemiological data change.

Lessons From Other Lifestyle Diseases

AIDS appears at a time in human history when much has already been learned about how to influence behaviour on a massive scale. A consensus is emerging regarding the operational definition of effective communication for controlling and preventing behavioural, or life-style diseases. Numerous professionals working on dozens of programs around the world are arriving at similar conclusions concerning the use of communication, marketing, and education to promote positive change in behaviour. Family planning, cancer prevention, heart disease risk reduction, sexually transmitted disease prevention, smallpox eradication, and diarrhoeal disease control have each arrived at a similar set of communication principles. Emphasis and vocabulary varies from one context to another, but all agree on the need for:

- Systematic communication planning;
- Audience research and program monitoring;
- Targeting of messages at specific audiences;
- Comprehensive, integrated, and sustained delivery of services and supplies; and
- Limited objectives with measurable results.

The social science literature in each area is now substantial. Indeed, this section is a review of reviews. Major articles have been cited to demonstrate the principal lessons arising from either a particular disease or health problem. To the extent possible, lessons have been expressed in the vernacular of the original author to emphasize the degree of consensus emerging among authors and fields.

As noted earlier, disagreements regarding communication strategies exist. Some practitioners favour mass media, others stress the role of interpersonal communications; some emphasize product development and distribution; and others perceive information, educational, and communication as important to success. Some experts are wedded to public-sector approaches, whereas others support private-sector approaches. All of the experts, however, seem to agree that effective public health communication can help to modify health-related behaviours.

The following portion of the proposal reviews lessons learned from six health problems:

- Sexually transmitted disease (STD);
- Family planning (unwanted pregnancy);
- Cancer;
- Heart disease;
- Smallpox; and
- Diarrhoeal disease.

We have selected these six areas because literature is available on how and with what effectiveness communication has been used to promote life-style changes in a mass audience, and because these six areas share behavioural characteristics with AIDS and between AIDS and each of the six health areas identified.

AIDS and the full spectrum of HIV infection do share common aspects with these six health problems, commonalities that permit us to learn important lessons from past successes and failures. At the same time, however, we must recognize that AIDS is a unique disease in that it alone combines all of the following characteristics in a single global health challenge. AIDS:

- Is fatal;
- Is sexually transmitted;
- Remains undetected for long periods of time;
- Lacks a cure, treatment, or vaccine;
- Engenders high political salience and social taboo; and
- Is clearly global in scope.

The following review will focus on insights to be adapted to the challenge of HIV transmission. We will look at the aspects of each problem most relevant to AIDS prevention. For example, we will focus on the global management aspect of diarrhoeal disease control and smallpox eradication, the message characteristics of STDs and family planning, and the behaviour change technology of cancer and heart disease prevention. Taken together, we believe these lessons represent an enormous reservoir of experience for shaping and influencing the design of effective AIDS control communication.

None, however, represents a proven model for AIDS prevention. None has influenced all or even most of those at highest risk. Moreover, these programs have been considered successful if shifts in behaviour occurred among 20-40% of the populations at risk, whereas controlling the spread of AIDS will require a much higher level of behaviour change, especially in some groups. Clearly,

we must push forward the boundaries of our experience if we are to address the magnitude of the AIDS threat.

Lessons from Education on STD

In many respects, sexually transmitted diseases (STD) are the most logical analog for AIDS education, because the HIV virus is sexually transmitted. Important similarities link the two problems. They are both:

- Involved with human sexuality, which has a low changeability quotient and high social awkwardness;
- Diseases transmitted through sexual contact;
- Socially stigmatized;
- Characterized by blaming the victim;
- Associated with morality and value systems that can impede overt disease-control efforts; and
- Linked to socially and emotionally charged consequences (such as revealing one's sexual preference) in addition to their disease consequences.

Given these similarities, Solomon and DeJong conclude in a review article entitled *Recent Sexually Transmitted Disease Prevention Efforts and Their Implications for AIDS Health Education*, that the following 12 principles are useful in designing AIDS risk-reduction messages, at least on the basis of USA and developed-country experience to date:

- Strive not to be moralistic.
- Recognize the enormous anxiety that AIDS evokes, develop strategies that acknowledge this stress, and provide means for coping with it.
- Conduct adequate preliminary research to ensure that messages reflect, or take into account, the existing knowledge, values, attitudes, beliefs, and practices of the target population.
- Focus on underlying attitudes, behaviour change, and skill development, particularly communication and interpersonal skills, rather than on the disease etiology or other factual information delivered for its own sake.
- Make explicit the relationship between specific behaviours and likely subsequent health or disease outcomes.
- When a given medium allows for elaboration, emphasize not only what to do but also the precise circumstances under which the behaviour is to be carried out, the benefits of doing so, and the consequences of failing to do so.
- Realistically acknowledge the obstacles to change and provide support and reinforcements for adopting new behaviours.
- Without minimizing or disguising the difficulties, establish a positive tone in which fear-arousing information is balanced by constructive suggestions for purposeful action.
- Strive to characterize the desired behaviour as normative by modelling appropriate role models and associating the target behaviour with other behaviour or qualities that are considered desirable by the intended audience.
- Develop strategies that are likely to engender identification between the target audience and the message.
- Deliver a clear, coordinated, and consistent message, or cluster of messages, through a variety of reinforcing channels of communication.
- Seek out intermediaries who can provide access to the audience and credibility to the project's message(s).

Lessons from Cancer Education

As has been demonstrated, cancer education also has many similarities to AIDS education. Cancer is still viewed by many as an incurable disease, which causes great fear and denial. Initially, it was thought to be "contagious" so that cancer victims were often isolated and stigmatized. Health-care providers lacked adequate information and effective treatment because clinical information was rapidly changing and frequently updated. The focus of much cancer education is also risk reduction and life-style change in fundamental biological processes, such as eating, smoking, and exercise. Several of the risk-reduction behaviours, such as breast self-examination, carry some of the sexually related taboos and fears associated with AIDS education. The parallel dilemmas of deciding to "check regularly for breast cancer" and deciding to be tested for HIV infection raise many of the same fears and obstacles to acceptance.

At the same time, AIDS is significantly different. Testing for HIV carries much greater political significance — raising fears of unemployment, quarantine, and even imprisonment. In the USA the early stereotyping of AIDS as a "gay disease" means that those who admit being infected risk being "branded." AIDS deals much more explicitly with sexuality than does cancer. Moreover,

there are treatments for cancer that offer greater hope than we can now offer the AIDS patient. Perhaps the most fundamental difference, however, is that cancer is not a communicable disease, whereas AIDS clearly is.

Several principal lessons from the experience with cancer education were summarized in an address by Donald C. Iverson, MD, at the Fifth National Cancer Communication Conference in February 1984. Noting the reduced consumption of beef and cigarettes in the USA, he pointed out that both education and economics "certainly played a role." He emphasized that progress has been made even in areas as difficult as medication taking, smoking cessation, and weight reduction. In addition, Dr Iverson highlighted the following findings:

- Comparisons of different behavioural change techniques for smoking cessation (appeal, stimulus satiation, cold turkey, and a hierarchical technique) showed that the initial advantage of one technique over another disappeared rapidly over time.
- Although it has been difficult to say clearly what intervention strategy is most effective, it is clear that most interventions are more effective than no intervention at all.
- Different strategies are needed for different populations.
- The level of effort required that initiation, as well as change, not be underestimated.
- Different strategies are needed to reduce smoking risk in practising populations from those used to delay unsafe practices in nonpractising populations (for example, adolescents).
- Segmentation of target populations by income levels, urban/rural, sex, and so forth is critical.
- People can be easily overwhelmed and demoralized when they first learn about a disease, such as cancer. Risk-reduction programs must lead them to identify those elements of disease prevention that are within their control.
- Identifying relevant "motivators for change" is a principal element in success. Health is not always the best motivator for prevention-related behaviours. Other categories include aesthetics, sexual desirability, a "high" from being healthy.
- Of the three principal change strategies — compliance, identification, and internalization — compliance has not been shown effective over the long term.

Iverson then lists guidelines that he believes increase the likelihood of program success. They are quoted directly as follows:

- Include in your program information which will cause the target population to believe that: (a) they are likely to be affected by the problem; (b) the problem is serious (physical, personal, social, and economic); (c) they can do something about the problem; and (d) no significant barriers exist to making useful changes.
- Use tally sheets to identify factors that are related to the behaviour (focus on circumstances and mood). Use tally sheets to identify difficult situations occurring after the behaviour change. Develop specific strategies to reduce difficulties with antecedent and reinforcing factors.
- Develop your program so that participants may establish individual goals. Ensure that the goals are realistic. Develop a reward system tied to achievement of the goal, such as behavioural contracts.
- Design the program so that, participants can make a number of small changes. This approach will allow them to experience success and gain confidence. Incremental changes are easier to make than either radical or major changes.
- Develop your program so that participants may have an opportunity to make a commitment to change. Allow each participant to select the type of commitment that is most important to him/her.
- Develop your program to allow for participation by the participant's spouse, family, peers, and friends. Whenever possible, use the program participants to develop support mechanisms. Individuals attempting behaviour change without active support of others are not likely to be successful.
- Use persons who are considered by the target audience to be experts, trustworthy, and familiar. Remember that the person delivering the message has an important effect on adoption.
- All programs should have follow-up components, ideally lasting for six months. It is easier to elicit one-time behaviour change than it is to sustain that change.
- Include opportunities in the program to discuss the possibility of failure. Identify reasons for failure and actions that can be taken to minimize the chance of failure. Give people permission to fail, but emphasize the need to maintain records.
- Select instructors carefully. Focus on intangible

factors, such as congenial personality, enthusiasm, and commitment. Provide continual training for instructors. Select the program that best meets your needs. The instructor effect always exceeds the program effect. If both are carefully selected, the chances of change are greatly enhanced.

Lessons from Heart-Disease Prevention

Heart-disease prevention requires sustained changes in several life-style behaviours: increased regular exercise, significant dietary changes, and regular blood-pressure testing. Similar to primary AIDS control behaviours, many of these changes must be life-long changes in habitual behaviours in the presence of significant external "temptation" and few natural reinforcements. Heart disease is different from AIDS in many important characteristics already noted for cancer and other nonsexually and noncommunicable diseases. But again, intriguing lessons for educators do emerge from more than two decades of experience with heart-disease prevention. In an article by Elder et al., applications of behaviour modification to community health education for heart disease prevention were reviewed. The most effective behaviour change techniques identified were:

- Positive reinforcement systems by which selected behaviours are strengthened by positive changes in the individuals' environment. Prizes, such as T-shirts, team prizes, token point systems for adults; televised quitting models depicting a variety of personal reinforcers; mobilization of coworkers, family, and friends to deliver encouragement; and a bounty system to reinforce expanded voluntary screening were examples mentioned from programs as far apart as rural Pennsylvania; small towns in California; North Korea; Finland and Pawtucket, Rhode Island.
- Barrier reduction or facilitation strategy by which impediments to adoption of new behaviours are reduced. Among the examples mentioned to make compliance easier are bicycle paths, development of low-sodium foods, and work site blood pressure services.
- Negative consequences and restrictions to help people avoid certain behaviours. Public commitments from adolescents "to not take up smoking" acted as a restriction on youth who did not wish to go back on a public promise. Betting and publicly agreeing to meet some weight loss goal acted as negative consequences to noncompliance. Obvious examples of smoking area prohibition were also cited.
- Feedback strategies, such as "progress reports," individual score keeping, and shaping, whereby individuals are rewarded for taking steps in the right direction. Particularly for complex behaviours, providing interim rewards for "successive approximations" has proven effective: in the control of hypertension, for example, first praising people who monitor their blood pressure, then asking them to make hygienic changes, medical interventions or both. "Nicotine fading," "psychological innovation," "party for a long life," and "heart-check screening" are other examples of the gradual "shaping" of habitual behaviours.
- Finally, combination approaches, such as contingency management or contracting in which an individual negotiates a specific behaviour change goal and establishes the types of rewards or penalties to be received. Both individual and community-wide application were cited. Industry-wide weight-loss programs have been employed using peer pressure and "team work" to heighten individual compliance.

The article ended by concluding that successful programs to prevent heart disease should:

- Be couched in local terms and languages.
- Emphasize positive reinforcement, wherever possible.
- Feed back early success to the community.
- Focus on gradual changes over time to minimize the most burdensome aspects of difficult behaviour change.
- Use less expensive reinforcers on a periodic basis rather than reinforcing every person with more expensive reinforcers.
- Emphasize simultaneous interventions addressed at individuals, groups, organization, and communities rather than single-level interventions aimed at only one group.
- Focus on specific target behaviours that the individuals can control.
- Follow a predictable change hierarchy that moves through the following sequence: (a) furnish evidence that the behaviour causes the problems; (b) provide evidence that changing behaviour will solve the problem; and (c) provide evidence that the change is relevant to the individual.

Lessons from Family Planning and Contraceptive Social Marketing

Family planning communication is also relevant to AIDS prevention, even though family planning is not a disease. As noted earlier, family planning, like AIDS prevention, is related to sexual behaviour, faces social taboos that lead to political and personal ambivalence, requires cooperation of sexual partners and relatives, calls for sustained change with delayed results, and often deals specifically with condom distribution and STD prevention.

Several major reviews of literature by Everett Rogers and D.L. Kincaid highlight principal lessons regarding family planning communication on a worldwide basis, learned as programs developed, often in the face of hostility, rumour, and political opposition.

Everett Rogers, *Communication Strategies for Family Planning* (1973), traces three important eras in the historical development of family planning. The Clinic Era assumed that clinic facilities were the key factor. The strategy was to open and equip clinics so that the public would seek them out. Disappointments led to a Field Era, in which aggressive outreach using home visits, mass communication, and mobilization campaigns sought to create awareness and popular demand for services. By 1973, Rogers was describing a "Contemporary Era" in which strategic communication thinking was replacing highly visible but limited campaigns. Strategic communication means that audiences replace general audiences; multichannels replace single channels; specific messages replace general ones; and social marketing emerges as a new paradigm. Social marketing in family planning, sometimes called contraceptive retail sales, offers an opportunity to use professional and commercial skills to segment and reach 26 specific target groups that lag in family planning acceptance.

Rogers has identified several mistakes in early family planning programs. First, he refers to "large-volume error," the assumption that a large quantity of messages would get the job done. Saturation alone has not proved effective, however, because poor-quality messages go unheeded. Second, he refers to dependency on modern mass media (radio and television) to the exclusion of traditional mass media (theatre, puppets, and so forth) and interpersonal channels at a time when media outreach was much less than it is today. Third, he notes the incorrect assumption that changes in knowledge and even attitudes would lead to related changes in contraceptive behaviour. Finally, Rogers describes the fallacy of the clinical message; namely, the expectation that medical professionals will develop the basic message and communicators will simply repackage them to make them more presentable and acceptable. Public health communicators know that the messages themselves (products, practices, and services), not just language, must emerge from the consumer based on research techniques that include both quantitative and qualitative research. Evidence exists that this can be done effectively in developing countries.

The diffusion of family planning practices was also found to differ from other innovations (for example, in agriculture) by not benefiting from a "diffusion effect," in which the rate of adoption increases dramatically once a certain percentage of individuals has already adopted. This "plateau," or stalled rate of diffusion, was attributed primarily to the taboo nature of family planning, which inhibited the expected increases in interpersonal communication between adopters and nonadopters. Later work by Rogers and Kincaid on *Communication Networks* (1983) demonstrated the importance of the interpersonal communication networks in local communities and their leaders and the role of "horizontal diffusion" in general in the adoption of contraceptives.

In several recent reviews of family planning communication drawn from current issues of *Population Reports* published by the Johns Hopkins University Population Information Program, a series of additional lessons for the AIDS prevention emerges, as outlined below:

- Rumour and counter-campaigns can be successfully resisted by:
  - Improving family planning services: (a) help clients choose the most appropriate family planning methods, (b) counsel new and continuing users, (c) follow up family planning adopters, (d) educate men and women about reproduction and the causes of infertility, and (e) train health workers and pharmacists;
  - Developing programs to neutralize rumours: (a) use interpersonal communication channels to change attitudes, (b) use satisfied clients as communicators, (c) involve local opinion

leaders, (d) develop good working relationships with local media, and (e) design multimedia campaigns to provide consistent, correct information;

- Launching a new product, whether a new brand of condoms or a new contraceptive implant, calls for a comprehensive approach: (a) the product must meet consumer needs, (b) the product must be conveniently available. (c) consumers must know and be persuaded to believe in that product, and (d) the price, whether financial or social (time, status, and energy), must minimize the cost and maximize the value of the product.

Social marketing of contraceptive products through commercial outlets may be especially relevant to programs to control HIV infection through condom sales and distribution. Some relevant reasons are as follows:

- Public information/product promotion: Product advertising should include brand-specific advertising from the beginning, although generic advertising may also be appropriate within the same campaign. Project designers and managers should be particularly sensitive to the need to monitor and evaluate advertising and promotional budgets to maximize program cost-effectiveness.
- Use of retailers: A wide range of retailers should be encouraged to handle the products.
- Use of the wholesale network: Condom projects should use the existing private-sector wholesale distribution network because it is more efficient than public-sector systems.
- Subsidies: Prices should be based on findings of price elasticity in demand studies. A heavy subsidy to introduce or expand sales may be an essential marketing strategy. Experience in Bangladesh, Jamaica, and Thailand has shown that demand for contraceptives, once established is less price-elastic than expected.
- Removal of tariffs and controls: Projects should insist on removal of constraints that limit imports and charge customs duties on imported commodities necessary to the program.
- Product mix: A range of nonmedical methods and brands should be offered. Different products and brands set at different prices appeal to different segments of the population.
- Modern management: A high degree of management capability is needed to plan and organize multiple, continuing, and complex activities. Overall program management requires strong leadership, close coordination among the activities, and accountability.
- Monitoring: Successful projects are critically dependent on continual assessment and feedback. Effective measures to assess management are an integral part of a successful effort.
- Governance: Social marketing programs that operate within the private, commercial sector are likely to have greater flexibility for management and marketing decisions.

Lessons from Child Survival

Diarrhoeal diseases (DD), immunizable diseases, and infant maternal nutrition are among the world's leading killers of children. Child survival programs popularized during the last five years require significant behavioural change at the home level and in some cases reeducation of the medical profession. Dozens of programs over the past 10 years, throughout the developing world, have struggled with creating and sustaining effective child-survival programs. This review draws heavily on a review completed in 1985 by the Academy for Educational Development of seven country programs in Bangladesh, Ecuador, Egypt, The Gambia, Honduras, Peru and Swaziland.

The following five lessons focus specifically on how to use communication to support a behavioural change program in child survival programs:

- Coverage, timeliness, and credibility are necessary. If the goal is to produce widespread use of a new behaviour, such as oral rehydration therapy in unsupervised settings, then three factors are critical: (a) coverage is the ability to reach many people quickly, and it is best achieved through mass media. In most developing countries, this means radio, with television having an increasingly important role in many others; (b) timeliness, or the availability of specific reminders at the moment they are needed, is best accomplished by print and graphic material, specifically a product label and a one-page graphic flyer or insert; (c) credibility, or the acceptance of product by audience, is best achieved through the full support and use of the product by recognized health professionals in the country — physicians,

nurses, and health workers.

- A plan must be comprehensive. Piecemeal programs are ineffective. To bring these three elements together, a comprehensive plan is needed and must include: (a) an adequate supply and distribution system; (b) an explicit link between what health providers, radio, and print media tell the public — a single set of simple, noncontradictory messages; (c) a training program for health-care providers which emphasizes how to teach mothers as well as how to work in the clinic; (d) saturation broadcasts scheduled to reach specific audiences; and (e) a series of simple print reminders of primary skills.
- The plan must be based on field research. An effective plan must be based on field research of existing audience practices and beliefs. The research should be basic information regarding what consumers are now doing, how they perceive the problem, what solution they prefer, what language they use to describe it, and what communication channels are likely to be most effective. The research should answer four critical questions: (a) Who is my specific target audience? (b) What can I hope to achieve? (c) What benefit does this audience want from our program? (d) What evidence or support can I give them that will be credible?
  The plan must be corrected as required — it must be flexible. Monitoring the campaign is essential. Regular visits to villages, watching how the product is being used or misused, and systematic interviews with health workers and mothers will expose weaknesses impossible to predict otherwise. Once discovered, these mistakes must be corrected and not "argued away." Mistakes are normal, almost inevitable, and they can be corrected if they are admitted.
- Emphasize simplicity. The temptation to complicate matters must be avoided. Advice to mothers must be simple, using only a few print materials. Health workers must not be asked to do much more than they are already doing. A few good radio programs should be repeated over and over rather than making dozens of new ones.
- Prevention is more difficult than treatment.

Finally, one of the key lessons to emerse from the child survival experience has been the relative lack of success with prevention behaviour when compared with treatment behaviours, such as oral rehydration salts (ORS). This relative failure can be explained in several ways:

- Prevention behaviours are more complicated. Changes in routine practices (handwashing, latrine use, and environmental sanitation) are not triggered by any naturally occurring stimulus, while treatment behaviours are cued by a highly salient event (episode of diarrhoea). When effective they produce a positive result the mother desires.
- Many decision-makers prefer to invest resources in a tangible product, such as ORS packets, than to allocate scarce resources to operationally difficult efforts and to diffuse prevention messages, such as encouraging handwashing.
- Health-care providers themselves are more comfortable with a treatment than with a prevention, thereby making it difficult to involve them in prevention delivery.

Lessons from Smallpox Eradication

Clearly, one of this century's most successful global public health programs was the eradication of smallpox, a tragic disease that disfigured and killed millions throughout the developing world. Although smallpox is not a life-style disease, it parallels AIDS in several interesting ways: no country was spared, control in one country was not ensured unless control everywhere was achieved, and it had high political salience because of the dramatic disfiguring aspects.

The eradication of smallpox is an important case study because it occurred throughout the world; programs were tailored to very different social systems and economic levels, and even in nations classified as the "poorest of the poor" eradication was successful. Smallpox eradication clearly demonstrated that, given a certain set of conditions, dramatic changes could take place in a short period of time.

D.H. Henderson, now Dean of the Johns Hopkins School of Public Health, outlines several lessons from the smallpox experience. These findings are summarized in an article by Dr Henderson in *Population Reports*, March/April 1986, "Immunizing the World's Children."

Conditions that suggest eradication rather than control be considered include:

- Man is the only host for the pathogen;

- Pathogens themselves do not survive for long periods in nature or humans;
- The diseases of sociopolitical salience must be high to muster needed support;
- Time needed to achieve eradication must be modest — 5-10 years;
- Measures needed to achieve eradication must be inexpensive; and
- Measures should be comparatively simple and should not require frequent repeated contacts with individuals in the population.

Even though it will not be possible to eradicate AIDS during the next 5-10 years, transmission of AIDS can be greatly reduced in this effort. Many lessons can be learned from the smallpox experience:

- A global program — an international commitment and a mechanism for coordination and monitoring worldwide.
- A special program with special budgets, full-time staff, and specific responsibilities linked to existing systems, not independent of them.
- Active outreach through public education and persuasion to ensure acceptance.
- Provision of services at a site and time convenient to the clients.
- Accurate methods of surveillance to measure success.
- Specialized field workers, because traditionally trained health providers do not change their behaviour quickly and revert easily to more traditional behaviour patterns without consistent supervision and support.
- Specific, measurable, realistic, and dynamic behavioural goals shared by all and used as the fundamental guide for strategy-making. (A few clear goals are better than an array of vague ones.)
- Quality control over selected key aspects of the program most related to achieving the targeted objectives.
- Management leadership by example and exhortation, rather than by directive.
- Coordination of all programmatic aspects — biological, research, surveillance, education, and fund-raising.
- Trained people who shared a core of common principles that are clearly spelled out in a training program and a manual or handbook.
- Quality control of donated materials to ensure their effectiveness.
- Standardization of supplies to ensure more rapid training and to avoid confusion.
- Discretionary funds to address unexpected urgent costs.
- Logistics management to ensure adequate availability of supplies and materials.
- A specific operational strategy for each sociopolitical context.
- Staff who take an active role in field operations.
- Problem-oriented, applied and basic research, including social science research.
- Certification, the ability to stipulate publicly that progress has been made and goals achieved.

Conclusion

The AIDS epidemic represents a unique challenge. No existing model can be simulated to make AIDS prevention easy. At the same time, however, helpful lessons do emerge from the accumulated experience of disease control and behavioural change efforts directed at other international health problems. The foregoing review has demonstrated that different authors working on different health problems have arrived at a remarkable consensus about what makes programs to change behaviour effective on a large scale.

We have examined six health problems that share important similarities with HIV infection, recognizing that no precise analog exists. The lessons that emerge can be expressed in terms of what not to do. Just as the positive lessons from these programs are similar, so too are the lessons concerning obstacles that inhibit success including:

- Inadequate planning: (a) program proceeds without overall policy, (b) program responsibility is regularly shifted from one office to another, (c) program proceeds without the full cooperation of the medical community, (d) user education/promotion begins before supplies and training are completed, (e) training is begun before materials are ready, and (f) resources, particularly for monitoring (travel and per diem costs), are unavailable.
- Inadequate education of users: (a) told too little, (b) given wrong advice, (c) user constraints often ignored, (d) existing beliefs ignored, (e) reaches too few people directly — too great a dependence on health workers alone, (f) messages often contradictory, and (g) messages often unclear to user.

- Inadequate training/orientation of health-care personnel: (a) in *AIDS 101*, too little and too theoretical, (b) in how to teach *AIDS 101*, (c) in what specific advice to give for presentation and treatment, and (d) in what vocabulary to use to be publicly acceptable but capable of having an impact.
- Inadequate supply/distribution systems for AIDS control products and support materials: (a) promotion and supply are out of phase, with one preceding the other, (b) supplies are inadequate for the demand, (c) distribution system does not work, and (d) private and public sectors are unable to work together.
- Inadequate Information on Program Performance, particularly on: (a) user attitudes toward benefits difficulties and confusions or mistakes, (b) health-care providers' attitudes and practices, and (c) the distribution system.

Summary of Lessons and Principles

This part of the proposal outlines some of the primary findings, principles, and lessons that emerge from this review, from a special workshop sponsored by the Academy on AIDS Education, and from the bidder's accumulated experience in health communication during the past ten years.

Summary Findings

- We lack reliable longitudinal studies that demonstrate conclusively that specific education interventions have reduced HIV seroconversion rates on a large scale.
- A number of studies demonstrate, through a variety of measures, the highly probable link between information (both systematic and casual) and reduction of risky behaviour.
- Personal loss of a friend or family member seems to correlate positively with willingness to reduce risk-related behaviour.
- Changes in knowledge are easiest to produce. Changes in attitudes and behaviour are much more difficult, even in well-organized and massive educational campaigns.
- Information source credibility may play a significant role in producing more effective behaviour change. If the source of information is credible to the individual and the message has visual appeal a greater reduction in risk behaviour may result.
- Changing drug use behaviour has proved more difficult, particularly in populations of social isolation, outcasts, criminal status and low education levels, than changes in sexual practices among more representative groups.
- Effective education is more than just information. Programs including service delivery, counselling, needle exchange, and condom distribution have proved essential.
- External competition from anticondom campaigns, prohibitions on advertising, false news stories, and rumours have played an important role in reducing the effectiveness of positive education campaigns.
- People selectively believe AIDS information for reasons of unexplained and idiosyncratic origin. For example, messages about casual transmission have often been more credible than those about preventive measures.
- Continuing programs are needed to motivate and sustain continued behavioural changes.

Principles of Effective HIV Prevention Education

On 26-27 February 1987, a panel of experts in HIV prevention programs was convened by the Academy for Educational Development to discuss:

- How and by what means has general awareness of HIV infection and its prevention evolved in the USA and what changes in attitudes, knowledge, and behaviour have resulted?
- How and in what ways are changes in awareness, knowledge, and behaviours related to each other?
- Which education techniques have worked or not worked, and why?
- What skills and talents are most needed?
- How are programs best evaluated?
- What, applications, if any, do these American factors have in programs to be carried out in the rest of the world?

The seminar was unique regarding both its format and the individuals who participated. No formal research presentations, readings of papers, panel discussions or debates transpired. Instead, some of the original creators and developers of the best HIV prevention programs in the USA — members of a unique reservoir of expertise gathered to share insights. It was the first time that many of these individuals had had the opportunity to reflect

on their often quite different experiences and the common themes that characterize them.

During the seminar, five basic principles emerged that integrate, and at the same time cut across, the insights, lessons, failures and successes of the American experience thus far with HIV. Few of the principles are altogether new when considered individually; many of them have, in fact, characterized efforts to prevent other life-style diseases, such as cancer and heart disease. Taken together, however, the following principles of HIV prevention education are more than the sum of their parts. They constitute a unique body of experience that is urgently important as a group if we are to reduce HIV transmission effectively.

Principle I: Get the Facts Right. Don't Promote Myths Inadvertently. Programs must be based on factual, scientific information, not on stereotypes, personal opinions, or other factors that have nothing to do with HIV infection. What people do not know about HIV infection may indeed hurt them, so may what they misunderstand. This epidemic thrives on ignorance and half-truths.

It is, therefore, crucial that prevention educators pay specific and careful attention to what is being said about HIV transmission, prevention, and symptoms. Everything should be checked and updated for accuracy. It is equally important to understand, and thus avoid, the stereotypes surrounding HIV infection that lead to misunderstandings, false impressions, lack of interest, or other impediments to behavioural change. A rule of thumb is to review, and review again, before any program is implemented. Programs also need to pretest education materials and also must be monitored and evaluated as frequently as possible while in operation. If something is wrong, change it. Mistakes are costly and they can actually compromise one's future ability to convey new or more complex messages effectively.

HIV infection is accomplished primarily, but not exclusively, through specific sexual behaviours; so is its prevention. Neither transmission nor prevention can be discussed effectively without discussing sex, often explicitly. Herein lies the public's first and often most formidable source of resistance to HIV prevention programs.

HIV infection and the spectrum of illness it causes are most often associated in people's minds with sex. Sex and sexual behaviour of any type makes people uncomfortable, certain types of sexual behaviour even more so. Prevention programs must, therefore, acknowledge not only people's reticence to talk about sex but also their ignorance about sex and sexual behaviours in the first place.

Even for those few who are able to handle a discussion of sexuality, however, homosexuality is another matter entirely. Men who have sex with men remain well outside the social mainstream of most societies and are frequently subjected to discrimination and violence. As the first, but by no means only, persons to be infected with HIV in the USA, Europe and other locations, they have been doubly unlucky. Not only have they had to bear the brunt of infection and disease so far; they have also had to bear largely alone the political, psychological, and social burdens of an epidemic that was early (and falsely) dubbed a "gay plague." As a result, discussions about HIV infection, even in countries that do not share this history, are often not about the infection at all but rather about people's fears and prejudices regarding sex in general and homosexuality in particular.

The early and continuing equation of HIV infection and AIDS with homosexuality has attached a stigma to both that is particularly tenacious despite clear evidence that the virus does not discriminate on the basis of sexual orientation. For example, one of the most stubborn USA stereotypes in HIV prevention is the notion that who you are (risk groups) is more important than what you do (risk behaviours) in determining your chances of being infected with HIV. By this logic, only gay and bisexual men are at risk of infection because most AIDS cases so far have been diagnosed in gay and bisexual men. This stereotype is wrong on several counts, however.

First, not all gay and bisexual men are sexually active; nor are they necessarily sexually active with each other; some are celibate, and many more are involved in relationships, such as marriages, in which their only sexual expression is sex with women. Second, all men who have sex with men (the behaviour) do not necessarily identify themselves as being gay or bisexual (the group). Those who practice the behaviour but do not perceive themselves to be part of the group will not be reached by prevention messages that address only the group. This has been proven in New York, San Francisco, and elsewhere when changes in public advertising copy — from "gay and bisexual

men are at risk" — have provoked significant increases in calls to HIV hot lines from people who have never previously acknowledged their own risk. Finally, and most obviously, men who have sex with men safely are no more at risk of infection than men who have sex with women safely.

Principle II: Make Prevention Messages Consistent, Clear, and Effective. It would seem self-evident that HIV prevention messages need to be factually consistent and clear, yet they have been almost anything but that over the past few years. The public has been treated to a series of mixed, misguided, or plainly inaccurate messages that appear to have caused permanent confusion for many people. Most of this damage could have been avoided — and we would be much further along in our efforts to stop the spread of HIV — if practitioners had recognized that "how" the message is crafted and conveyed is just as important as "what" is being said.

A good example of an inaccurate message badly communicated is the still widely used prevention directive to "reduce the number of your sexual partners." The implication here is that the fewer sexual partners one has, the less risk of infection one encounters. That is true as far as it goes, but it is actually beside the point: how many sexual partners are too many, after all, and how few enough? The message completely ignores the fact that a single "unsafe" sex act with an infected individual is sufficient to transmit the virus. A more accurate and clearer message would state that it is what you do sexually, not how many times you do it, that determines your risk of infection with HIV.

While reducing the number of partners reduces the risk statistically, it does not eliminate it. Naturally, with a fatal disease, the individual wants to eliminate the risk, or reduce it as much as possible. The problem is that to "reduce number of partners" is an epidemiologist's message, relevant to rates of infection in the overall population, but irrelevant to the individual, who wants to eliminate risk. A clearer message would combine fewer partners with explicit safe sex advice.

A message can also be the wrong one at the wrong time, even though it is clear and accurate. Example: in a focus group testing a new public advertisement campaign designed to allay fear of casual HIV transmission, participants rejected a print ad showing a water fountain as one way HIV was not transmitted in favour of another ad showing a water glass with the same message. Reason: people are more afraid of saliva left on a shared glass than they are of a public water fountain.

Because HIV prevention messages are complicated, the best marketing approach seems to be multisectoral; putting as many different messages in as many different places — as possible. Different messages work for different people at different times. The more numbers and types of messages there are, the greater the chances of reaching everyone with at least some of the messages sometimes.

Other factors to keep in mind include saying what they understand. This is really all there is to explicitness in HIV prevention programs. For example, educators are still euphemistically cautioning people "not to exchange body fluids." By "exchange" they really mean ejaculate, swallow, insert, and so forth. By "body fluids" they really mean semen, vaginal secretions, faeces, breast milk, urine and blood, not sweat or tears. There is, of course, a world of difference in the clarity of the words used as well as the messages they convey.

To reach certain audiences, certain messages will need to be phrased in the vernacular or even crudely. For example, IV drug users may understand the word "works" better than "syringe." Or gay men may understand you more clearly if you say "cum" rather than "ejaculate." Take care to determine the right message and the right words for each different audience.

Principle III: Reflect the Awareness Spectrum. Individuals, as well as entire communities, go through a series of stages in their willingness and ability to address HIV prevention.

The first stage is denial. People deny their risk of infection by creating an "us-versus-them" mentality. It can't happen here or to us. They'll get it; we won't. Who "they" are varies depending on the eye of the beholder. It is at this stage that individuals are most likely to pooh-pooh their need to learn anything at all about HIV infection.

The second stage is anger. Perhaps the first case of AIDS is diagnosed in a community, or someone's close friend or relative dies. The conviction of invulnerability cracks, and anger sweeps in. Initially, the anger is almost always irrational, directed not toward the virus but rather those infected by it. That leads to calls for

ineffective measures to contain people rather than the infection. Prevention programs at this stage spend more time separating fact from fiction and reassuring a frequently hysterical public than they do communicating information that helps people to prevent transmission.

The third stage is panic. When they can no longer deny their risk, and their anger fails to stop the spread of disease, people panic. Suddenly, the tables are reversed and everyone, no matter how unlikely a candidate, is convinced that he or she has been infected. Hot lines and physicians are deluged with a demand for basic information. This stage, although difficult, offers an opportunity to convey reliable prevention messages.

The fourth stage is active acceptance. The public acknowledges, however grudgingly, the long-term presence of a deadly new infection in its midst. Anger and panic abate somewhat, to be replaced by the strong desire to do something. Recommendations for action are not always sensible; many are in fact counter-productive. The need to act, however, is evidence of a healthy response to crisis, and it can be channelled toward effective measures. At this stage, prevention programs come into their own.

The four stages are not always linear. Experience has shown that individuals, within a society, will reflect different stages at the same moment and that not all individuals reach active acceptance of HIV infection. Therefore, nothing can be assumed about relative levels of knowledge, understanding, or, most important, commitment to change at any point on the continuum. Certainly, we cannot afford to wait to mount effective prevention programs until people are fully ready for them. Indeed, the four stages are important because they suggest a psychosocial framework within which to develop effective prevention program. For individuals at the stage of denial, one type of message is needed, whereas for panic or acceptance quite different approaches are necessary. If reliable measures of people's response pattern can be developed, this framework can serve not only as a guide to message and program positioning but also as a measure of program success.

Principle IV: Enable People to Change Behaviours and Maintain Those Changes Over Time. HIV prevention is about giving up certain sexual behaviours that may be an integral part of a person's life. But if something important is to be taken away, then it must be replaced by something else of equal value. Most people need to be convinced, for example, that safer sex practices are as erotic and pleasurable as the unsafe behaviours they replace. Information alone is not enough. People must also be helped to put that information into action and to like the changes. If they do not, they will not sustain preventive behaviours over time.

Researchers have developed these concepts on the basis of studies conducted in San Francisco, among other places, where a majority of gay men surveyed said they continued to practice unsafe sex even though they understand the risks of HIV infection. Why? Their answers read like a catechism of the challenges facing HIV prevention educators:

- Sex is a difficult behaviour to negotiate. People are uncomfortable discussing sex and specific sexual acts.
- It is often easier to make an unsafe mistake rather than talk about it first or, worse, refuse to do it. Refusal, in particular, opens people up to either insults or ridicule.
- Stress, confusion, drugs, alcohol, and other factors weaken one's sense of resolve.

All these factors argue for a more comprehensive approach to prevention education than the simple and relatively straightforward transfer of knowledge. People must be assisted in working their way through the following prevention stages:

- Risk ownership: "It can happen to me."
- Infection is preventable: "There is something I can do to prevent it."
- Peer support: "Someone will help me to change."
- Reward: "Prevention (safer sex) can be fun."

Early in this process, motivation to change becomes a key issue. Among the reasons people have cited to change longstanding but unsafe sexual behaviours:

- "It's the right thing to do."
- "I don't want to die like that."
- "I lost a friend."
- "I want to be around to lick this thing."
- "Safe sex is hot, and I want to be the hottest guy around."
- "I want to protect my wife and unborn children."
- "Someone I trust and admire does it."
- "It's the only way to find the partner I want."

These and other convictions about the importance

of HIV prevention need to be made easily accessible to someone attempting to change.

Peer support and acceptance are extremely important: behaviours that are generally encouraged are more likely to be adopted permanently than those that are not. A case in point is the use of condoms. Studies have shown that although people understand that condoms prevent transmission of disease, few people like them. The task of HIV educators thus becomes one of creating a social and sexual environment in which condoms are not only practical but also embody a positive value and may even be fun.

Principle V: Build a Community Consensus on HIV Prevention. Preventing the spread of HIV infection is more than a strategic positioning problem, it is also a politically volatile enterprise. In recent years, communities throughout the USA have been polarized over issues of HIV contagion, quarantine, social and sexual mores, and so forth. The politics surrounding AIDS and HIV infection can, therefore, be expected to play a major role, for better or worse, in any community's response to this epidemic.

Whether at the national, state, or local level, a policy consensus on HIV prevention is essential to gain widespread cooperation in carrying out programs. If people are unprepared for the impact of prevention programs, or if specific people find messages prepared specifically for them to be unconvincing and inept, then attempts to prevent HIV transmission, however well-intended, will fail.

In the USA the need to involve and draw upon the expertise of influential local decision-makers has resulted in a fairly uniform approach to the development of HIV prevention policy. Individually and often simultaneously, sometimes through volunteer action, and sometimes by official appointment, cities, countries, and states have convened what are usually called "AIDS Task Forces" or "AIDS Advisory Committees." These are usually working bodies with considerable clout to which government, the private sector, media, and the public look for guidance. Their influence is often (although not always) advisory, but their recommendations are rarely, if ever, ignored. For communities getting US Centers for Disease Control (CDC) education grants, all education materials must be approved by community review boards.

These task forces or committees are usually composed of at least one representative from each of the following categories:

- Public health authorities;
- Political authorities (city council, mayor, governor, and state legislators);
- Physicians, nurses, paramedical personnel;
- Hospital, nursing home, hospice, and other health-care industries;
- HIV service-providing organizations;
- Red Cross or other blood industries;
- At-risk individuals (gay men, IV drug users, and haemophiliacs);
- Ethnic minorities (particularly blacks and Hispanics);
- The media (television, radio, and newspapers);
- Educators and schools (parent-teacher association (PTA), school board, universities and colleges), and students and teachers;
- Religious leaders; and
- Legal and judicial authorities (attorneys, judges, and police officers).

The purpose of these groups is to develop and coordinate local prevention policy, to function as a central source of reliable expertise and moral authority on the subject, and to adjudicate the inevitable conflicts that HIV-related programs provoke.

Group decisions take longer and are often less precise than individual ones. The best and most effective individual decisions, however, are almost certain to run into trouble if they lead to programs that are unacceptable to the larger community in which they are being implemented. In addition, the political liabilities inherent in events, such as the unjustified expulsion of an infected child from a local school, can be more equitably shared (and are more likely to be resolved) by a respected group of peers than by a single individual or organization.

Among the task force or committee's first priorities might be to:

- Survey local HIV-related needs, resources, and expertise for referral and budgetary purposes;
- Mobilize local resources on a volunteer basis, wherever possible, and seek funding for those activities that lack it;
- Review, validate, and support prevention messages that are sensitive to local needs and effectively reach their intended local audiences.

Prevention programs work better and are more effective if they are planned and carried out locally. Imposing program structure, content or mechanics from the outside is rarely successful. At

the same time, ways must be found to allow everyone — including higher authorities, however removed they may be from the actual process — to share credit for, and take pride in, program successes as they occur.

Lessons

Although recognizing that in many respects AIDS is a unique challenge, we know that, as in like most behaviour change processes, people must:

- Learn about AIDS;
- Understand the basic facts about AIDS;
- Believe that those facts are relevant to their lives;
- Try new protective behaviours; and
- Sustain those new behaviours over time.

We have identified 22 techniques, adapted from experience in marketing, behaviour modification, and practical AIDS education programs, which provide ways to achieve each of the five changes noted in the foregoing. We believe they constitute an initial "checklist for effectiveness," as shown in the exhibit on the following page.

We are deeply indebted to the following individuals for their advice, counsel, and their willingness to share, what for many of them has been a terribly personal commitment to the fight against AIDS: Mr Calle Almedal, Ms Betsy McGee, Ms Terry Baugh, Mr Anthony Meyer, Ms Judy Brace, Dr Jan-Olof Morfeldt, Mr Alexander J. Greeley, Mr Robert Porter, Mr Craig Harris, Ms Susan Saunders, Mr Jeff Harris, Ms Holly Smith, Mr Raymond Jacobs, Mr Jack Stein, Dr Richard P. Keeling, Ms Dace Stone, Ms Ruth Mara, Ms Carol Sussman, Mr Glen Margo.

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Figure 1. A Checklist for Prevention Effectiveness

If Health Promotion is going to successfully reduce the rate of HIV transmission then people at risk of infection must experience each of the five stages noted below. We have listed 22 techniques for helping achieve these changes through health promotion. These techniques also serve as a checklist for effectiveness for your health promotion program.

For the Audience to:		The Program must:
BE AWARE OF	[ ]	Use multichannels in a coordinated way.
	[ ]	Repeat messages frequently.
	[ ]	Be bold, break the pattern you usually use.
UNDERSTAND CORRECTLY	[ ]	Promote only a few messages at one time.
	[ ]	Be direct and specific – focus on behaviour (what, when, and what consequences).
	[ ]	Use the local context – stories, language, personalities.
	[ ]	Be consistent across all messages.
BELIEVE IN AND ACCEPT	[ ]	Generate trust, use a credible source of information.
	[ ]	Feature the most compelling benefit to the audience.
	[ ]	Personalize the behaviour – make it directly relevant.
	[ ]	Show the value of the new behaviour over competition.
	[ ]	Appeal to heart and mind.
	[ ]	Acknowledge obstacles.
	[ ]	Address fear and anxiety.
TRY ONCE	[ ]	Select actionable, practical behaviours.
	[ ]	Increase access.
	[ ]	Identify and minimize external obstacles.
	[ ]	Provide external incentives if necessary.
CONTINUE USING	[ ]	Ensure that positive consequences are perceived.
	[ ]	Minimize negative consequences.
	[ ]	Replace external rewards with internal ones.
	[ ]	Build community support and create new norms.

Research on Human Sexuality in Pattern I Countries

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Résumé en français. *Dans les pays de tendance I, la recherche sur la sexualité humaine est un phénomène relativement récent, sur lequel se penchent certains organismes, programmes de formation et journaux scientifiques. A ce jour, en raison de contraintes éthiques, pratiques, politiques ou financières, la plupart des travaux portant sur la sexualité humaine ont été de nature corrélationnelle, donc étrangers aux relations causales. En outre, peu d'études ayant été menées auprès d'échantillons représentatifs de populations cibles, il est difficile de tirer des généralisations applicables à des populations plus vastes.*

Au chapitre de la prévalence du syndrome d'immunodéficience acquise (SIDA) dans les pays de tendance I, il existe des différences notables d'un pays à l'autre. En effet, il semblerait y avoir corrélation entre la prévalence du SIDA dans une culture donnée et divers facteurs liés à la sexualité. Ainsi, dans les cultures qui traitent la sexualité comme une fonction normale de l'existence, notamment dans les pays scandinaves, l'accent ne porte pas sur les conséquences fâcheuses de l'expression de la sexualité, qu'il s'agisse de grossesses non désirées, de maladies transmissibles sexuellement (MTS) ou d'agression sexuelle. En fait, les normes sociales, les milieux gouvernementaux et autres favorisent les échanges positifs sur l'anatomie, la physiologie, les fonctions sexuelles et les sentiments, s'adressant à tous les individus, dès l'enfance. Comparativement aux habitants des Amériques, les peuples scandinaves font preuve d'une plus grande ouverture d'esprit en matière de sexualité, mentalité qui se reflète de diverses façons dans leur culture : libre-accès à des cliniques d'information sur la sexualité et la contraception, programmes d'éducation sexuelle auprès de la population d'âge scolaire, plages où le nudisme est autorisé, représentation de la nudité et de l'activité sexuelle dans les médias. Aussi, dans les pays scandinaves, l'accent ne porte pas sur les incidences négatives résultant des contacts sexuels.

Par contre, en Amérique du Nord et dans certaines régions de l'Amérique du Sud où la sexualité demeure un sujet plus ou moins tabou, il n'existe pas de programmes nationaux d'éducation en matière de sexualité et de contraception, et l'apprentissage de la sexualité chez les jeunes, relevant des parents et de la formation scolaire, est inadéquat. Dans ces pays, dirigeants et parents visent à protéger les enfants et les adolescents de choix peu judicieux sur le plan sexuel, mais ils ne proposent pas à ces jeunes les outils leur permettant de formuler de façon éclairée leurs propres règles de conduite et éviter ainsi les activités sexuelles à risque, ce que confirment de nombreux exemples.

Même si les corrélations établies dans les pays de tendance I laissent

croire qu'une plus grande ouverture d'esprit et davantage d'information en matière de sexualité contribueraient à contrôler et à enrayer les déboires associés à l'activité sexuelle, y compris la transmission du virus de l'immunodéficience humaine (VIH), les pays les plus dynamiques au chapitre de la recherche sur la sexualité sont entravés dans leurs travaux par les attitudes des dirigeants et des organismes de financement. Il est paradoxal de constater que même si les études sur les préadolescents et les adolescents nord-américains démontrent que ces derniers sont sexuellement actifs, les organismes gouvernementaux de financement et les comités d'éthique de ces pays considèrent qu'il est moralement inacceptable de mener des sondages auprès des jeunes sur leurs attitudes et comportements sexuels.

Il ne fait aucun doute qu'il faut effectuer des recherches plus poussées pour mieux connaître comment les attitudes et les comportements sexuels sont acquis, transmis et modifiés dans tous les pays à tendance I. Bien que l'étude de l'apprentissage sexuel chez les jeunes enfants soulève des questions d'ordre éthique, cela n'exclut pas pour autant les travaux menés auprès d'adolescents au seuil du monde adulte, dans la mesure où ceux-ci y consentent de façon éclairée. Dans le cadre de ces études, certains groupes recevraient une solide éducation sexuelle. Grâce à des groupes témoins, il serait possible d'analyser les répercussions d'une telle éducation, notamment si elle influe sur la conduite et les comportements sexuels des jeunes gens de façon à améliorer leur bien-être, soit leur permettre de faire des choix plus éclairés ou de vivre concrètement et en toute sérénité leur sexualité. Encore faut-il définir certains besoins précis en matière de recherche et comparer le succès relatif de divers programmes d'intervention.

Status and History

Acquired immunodeficiency syndrome (AIDS) Pattern I countries include North America, Mexico, parts of Central America, South America, Western European countries, Australia, and New Zealand. They are characterized as Pattern I countries on the basis of primary modes of transmission and prevalence rates (Mann et al. 1988). In terms of sexual transmission, Pattern I countries involve primarily homosexual and bisexual contacts in contrast with Pattern II countries in which sexual transmission has been primarily through heterosexual contacts. Pattern I countries differ from Pattern III countries in prevalence, in that AIDS appears to be far more prevalent in Pattern I countries than in Pattern III countries (North Africa, Eastern Europe, and Asia).

Apart from the similarities regarding AIDS transmission routes and prevalence rates that allow Pattern I countries to be grouped together, they are quite distinct in their histories, customs, and sexual attitudes and behaviours.

To understand the contemporary status of sex research, it is useful to look at its relatively short history. Although there has been scholarly interest in sexual anatomy, behaviour, and values dating back to the time of Hippocrates, Plato, and Aristotle, modern research on sexual attitudes and behaviour is in its infancy compared to research conducted on other aspects of human and infrahuman behaviour (e.g., anthropological, medical, sociological, psychological, zoological, etc.). In the 19th century, concerns about illness, sexual psychopathy, and degeneracy led to systematic observations (and some erroneous conclusions about the relationship of some sexual behaviours to health and normalcy) by various physicians. One of the most notable of these was Richard von Krafft-Ebing, who catalogued a variety of types of sexual "deviations" in *Psychopathia Sexualis* (1892).

The idea of developing a specific field devoted to the understanding of sexuality was first offered by the German dermatologist Iwan Bloch. The first professional journal, the *Journal for Sexology*, edited by Magnus Hirschfeld, was initially published for only one year in 1908 in Berlin, and then was absorbed by another less specialized journal. In 1914, Iwan Bloch and Albert Eulenburg began to republish the journal, which survived until 1932. The first two professional groups, the Medical Society for Sexology and Eugenics and the International Society for Sex Research, were founded in Berlin in 1913. In 1919, Hirschfeld founded the world's first Institute for Sex Research and organized it as a foundation under government auspices. The Nazis destroyed the nascent institute in 1933 and burned its books and papers. Motivation for the attack has been attributed to two factors: antisemitism and concern by many prominent Nazis that the Institute had too much information about party leaders (Haeberle 1983).

Following World War II, there were sporadic, small-scale studies conducted and published in

scholarly journals, but it was the publication of the Kinsey volumes in 1948 and 1953 in the United States that helped to begin the process of bringing sex out of the closet. Kinsey and the work of his group were objects of much hate mail. The Institute for Sex Research at the University of Indiana, headed by Kinsey, and funded by the Rockefeller Foundation, was victimized by the political assaults of the McCarthy era. The Rockefeller Foundation itself was attacked for its financial support of the Kinsey group's research by the Congressman heading the Congressional Committee to investigate Tax Exempt Foundations, and the Rockefeller Foundation withdrew its funding of the Kinsey group's research in 1953. With the publication of the ground-breaking work on physiological responses to sexual stimulation, Masters and Johnson (1966) faced similar, if less dire, harassment (Allgeier 1984).

The Society for the Scientific Study of Sex, the first professional group that still exists whose mission is to sponsor the dissemination of research about sexuality, began in 1957 in the USA, and in 1964, it began the publication of the first scholarly journal still in existence, *The Journal of Sex Research* (JSR). Since that time, a number of journals have been initiated, most notably, *Archives of Sexual Behavior* (ASB), and to this day, JSR and ASB remain the two journals in North America that publish research focusing broadly on sexual behaviour, although a new journal, *The Journal of Psychology and Human Sexuality*, began publication last year.

There are a number of other journals that focus on more specialized topics such as the *Journal of Homosexuality*, *Journal of Sex and Marital Therapy*, and *Family Planning Perspectives*. *SIECUS Reports*, published by the Sex Information and Education Council of the USA, is aimed at disseminating knowledge – particularly about sex education – to a wider audience than researchers in the field. Its sister organization, SIECAN publishes a newsletter with the same general goal for Canadian readers. Much of the research relevant to sexual attitudes and behaviours, however, is published in the journals of other speciality areas (e.g., psychology, medicine, sociology, etc.) as a glance at the reference list for this paper will show.

Special Considerations

Political policies and social reactions to research on sexuality have hampered efforts to obtain (and in some cases to disseminate) knowledge about human sexuality. A 1981 decision by Raymond Bynum, the Commissioner of Education in the state of Texas, provided an ironic reflection of societal attitudes toward the collection and publication of knowledge about sexuality. Mr. Bynum ordered Webster's Dictionary to be removed from the list of approved textbooks for the state of Texas because it contained seven words that the US Supreme Court, in 1973, judged to be unfit for broadcast. This occurred in the year that AIDS first began to be recognized as a clinical entity.

In 1982, Bynum sent letters to publishers of five series of health textbooks that were up for adoption for grades four through eight, advising them to "delete all reference to venereal disease and sexually transmitted diseases." According to state law in Texas, local school boards may purchase only those books that are on the state board's approved list. In that same year, Texas ranked second in the USA in incidence of syphilis and twelfth in reported incidence of gonorrhoea.

In an essay accompanying the publication of *Scientific American's* special issue on AIDS, Lewis Thomas, President emeritus of the Memorial Sloan-Kettering Cancer Center, wrote:

> If AIDS had first appeared 10 to 15 years ago, before the research technology of molecular biology had developed the marvelous tool of recombinant DNA, we would still be completely stuck, quite unable even to make intelligent guesses about the cause of the disease. Thanks to the new methods, which emerged from entirely *basic* research having nothing at all to do with any medical problem, we now know more about HIV's structure, molecular composition, behavior and target cells than about those of any other virus in the world (1988, p.152, emphasis added).

Unfortunately, *basic* research on the acquisition of sexual attitudes and proclivities to engage in specific sexual acts under particular conditions does not receive governmental support in North America. Those research proposals that are approved must demonstrate their relevance to a specific societal problem, such as unwanted adolescent pregnancy, to be funded. As will be discussed, the target populations for such studies have already acquired specific sexual habits. In many cases, these habits (failure to discuss or use

contraceptives, failure to discuss specific sexual and relationship motivations) are maladaptive and involve the risks of unwanted pregnancy, sexually transmitted diseases, and sexual exploitation.

Estimates of the time it will take to develop cures and vaccines for AIDS vary, but no one has suggested that such treatments will be available within the next few years. However, the major means of transmission are well known at this point, and most of these involve so-called voluntary behaviours such as sex with large numbers of partners; unprotected anal, vaginal, or oral intercourse; and use of dirty needles for injection of illicit drugs. Thus, the only major way of slowing or stopping the spread of AIDS at this time is to get people to alter their sexual practices. Behaviourial scientists are not in the fortunate situation enjoyed by molecular biologists. No large available pool of basic knowledge exists to help us determine the most effective way to induce people to alter their sexual practices to increase the positive consequences and reduce the negative consequences of sexual intimacy.

On the other hand, a considerable amount of information has been obtained in the 40 years since the Kinsey group published their first volume, *Sexual Behavior in the Human Male* (1948). Thus, it came as something of a shock to those people involved in research on sexuality in North America when the US National Academy of Sciences' 1986 Report on AIDS concluded that little research on sexual attitudes and behaviour had been published since the Kinsey group's volumes (1948, 1953). Although the Kinsey group clearly paved the way for research on sexuality, considerable progress has been made since that time both in the content and process of sex research. Unfortunately, much of the research that has reached attention beyond those in the sex research community is conducted by people with little training in theories or research methodology and has been seriously flawed in its sampling and conclusions. For example, Hite's (1979) conclusions regarding adult female sexuality are based on responses of people who chose to complete and send lengthy questionnaires that were published primarily in feminist magazines, and her findings cannot be generalized to American women.

Similarly, Masters et al.'s (1988) book, *CRISIS: heterosexual behavior in the age of AIDS*, estimated the chances of contracting AIDS from acts of unprotected intercourse. Their conclusions were based on responses of a self-selected group of 800 people. Half of their sample were reportedly monogamous, and, to be included in the study, the other half had to report having had a least six different sexual partners a year for the five years preceding the study. This requirement made them very unrepresentative of the population of nonmonogamous people, so generalization from their study is inappropriate.

Exemplified by the ongoing debate over the term to describe ourselves and what we do – sexologists and sexology versus psychologists, for example, and research on sexuality, respectively – our "field" or "focus of inquiry" does not yet have a unified identity akin to that enjoyed by scientists in more traditional disciplines. This is particularly true in North America. This is probably because of the relative youth of the field, relatively repressive societal attitudes toward sexuality in many Western countries, and the resultant difficulty in collecting and disseminating information about sexuality and having that information accepted by those not in the field.

The current furore over plans by the National Institute of Child Health and Human Development to sponsor a study of sexual behaviour with a representative sample of American adults to get needed information to help in our understanding of the spread of AIDS is a sad example of the repressive attitudes toward sexuality in the USA. In an editorial published in *USA Today*, (p.8A, April 20, 1989) under the headline "We don't need this pornographic research," US Congressional Representative William E. Dannemeyer acknowledged the threat of AIDS but stated that tax dollars are better spent on studies examining the extent of AIDS infection using seroprevalence surveys than in obtaining basic information on sexual behaviour. Essentially, he endorsed research that measures the extent of infection and disparaged research that might help to understand how to prevent further transmission of the disease.

Other problems associated with doing research on sexuality have been described by Fisher (1989) who noted that in this area, many laypersons may consider themselves experts on the topic being studied by a given sex researcher in ways that are not faced by those doing research in other areas (e.g., physics, etc.). Thus, if the data collected by a given sex research team do not conform to the beliefs or value system of laypersons, including

scientists trained in nonsexuality related areas, they are likely to discount it. For example, there is a clear association between government support and advocacy for the provision of sex education throughout the school years and relatively low rates of sexuality-related problems that have been seen in some countries such as Sweden (Jones et al. 1986). However, even such powerful policymakers as the US Surgeon General C. Everett Koop (1987), motivated by the desire to reduce the spread of AIDS, faced an uphill battle in attempts to change public policy in the USA to increase the level of knowledge about sexuality through courses in the public schools. During the Reagan administration, one of Koop's chief opponents (beyond the USA President) was William Bennett, then head of the Department of Education.

Koop (1987) asserted that preadolescents and adolescents are especially vulnerable to AIDS because they tend to experiment with sexuality and drugs. Beliefs and practices that lead to negative consequences for individuals and for society begin in childhood, but it has been very difficult for researchers to obtain permission to study the development of sexual attitudes and behaviours during childhood.

Research conducted by Goldman and Goldman (1982) presents a notable exception to the statement about the absence of sex research with children and young adolescents. They carefully constructed their interview schedule omitting any reference to "sex" or "sexuality," although understanding children's perceptions of this topic was one of the major goals of their study. They avoided references to sex because they wanted to avoid offending school boards and parents, both of whom were given descriptions of the research before signing informed consent forms for their children to participate. They experienced no difficulty in obtaining samples from Australia, Britain, or Sweden. From officials in the USA and Canada, however, they "encountered widespread negative attitudes and considerable opposition." They concluded that the major reason for their difficulties was the direct political control exercised by elected Boards of Education. The fact that parents had to give informed consent even after Boards of Education had approved their research further restricts generalizations from their sample. That is, although the North American participants in their cross-national sample were less knowledgeable about various aspects of sexuality than their European or Australian counterparts, participants from the North American samples were presumably from families with more liberal or open attitudes toward sexuality than would be characteristic of the population as a whole. Specifically, volunteer bias is likely to have interfered with the extent to which the North American children's knowledge was representative of that of the average North American child.

Because homosexual and bisexual populations in Pattern I countries have been one of the high-risk groups, understanding of their sexual attitudes and behaviours are also important. In his analysis of 165 articles on homosexuality in Britain since 1965, however, Furnell (1986) concluded that personal and social factors may account for the relative paucity of psychological studies of lesbian and gay experience. He suggested that, although there is increased interest in the problems facing homosexual men and women, the provisions and nature of therapy, counselling and social support, and the psychological dimensions of lesbian and gay lifestyles, very little sophisticated psychological research has been done in these areas in Britain.

Thus, political issues and social norms in Pattern I countries differentially relate to the kinds of questions that may be asked, the populations that may be sampled, and the methodologies and measures that may be used. Further examples of these issues will emerge in the context of the descriptions of specific aspects of sexual development and behaviour during the lifespan.

Methodologies Employed

The methods employed in conducting research relevant to sexuality range from relatively straightforward public opinion surveys to complex mathematical models that build on existing data to predict future events (May and Anderson 1987; Nahmias 1989). Self-administered surveys, interviews, case studies, field observations, and laboratory experiments have all been used – sometimes in combination – to study sexual attitudes and behaviour.

Embedded within these broad methodological approaches are a plethora of measures and instruments with known or unknown norms and psychometric properties such as questionnaires,

various attitudinal, knowledge, and behaviourial scales; observational rating scales; physiological response measures; biochemical assays; etc. For the most part, such measures have been used in descriptive research yielding correlations between one or more measures, but they may also be manipulated along with other variables in experimental designs that may permit causal inferences in some cases. An example of an unusually well-done study that combined both experimental manipulations and self-administered questionnaires is that conducted by Herold et al. (1979). To determine what, if any, effect ingestion of Vitamin E has on sexual desires and arousal, Herold et al. used a double-blind procedure, and assigned a group of volunteers to one of two groups. One group received capsules containing Vitamin E and the other received placebo capsules (the experimental manipulation). The authors asked members of both groups to record daily self-report forms on their levels of sexual arousal and other behaviours. Although Vitamin E was unrelated to levels of sexual arousal and so forth, Herold et al. carefully noted that generalization of findings from their study in the absence of more research was inappropriate in that other samples might obtain a relationship, or individual differences in susceptibility to Vitamin E might affect results.

In that regard, it should be noted that there is a movement within the behaviourial sciences that questions the veracity of contemporary scientific methods (Lincoln and Guba 1985). At their most extreme, proponents of this position suggest that what many of us perceive ourselves to be doing in the name of science actually amounts to little more than reporting our perceptions of past events; that is, what one group of people do, at one point in time, under a particular set of conditions. According to this perspective, because all of these variables cannot be truly replicated, our "research reports" and attempts at prediction are really historical reports that cannot be generalized. On the other hand, as long as we view our generalizations as statements with greater or less probability, I believe that we can increase human well-being by attempting to conduct research that is as valid and reliable as possible. A full discussion of the issue of the threats to the validity of qualitative and quantitative research approaches to human sexuality is beyond the scope of this paper and has been provided in the papers for this workshop by Zeller and Catania (this volume).

Research on Lifespan Sexuality

Childhood and Entry Into Adolescence

The challenges and tasks of childhood vis-à-vis sexuality involve developing one's identity as a person and, as a male or female, learning to label objects and events in the world including one's body parts and feelings, exploring one's environment including oneself and one's relationship to others, and learning to master various age-appropriate tasks. As they begin the transition between childhood and adolescence, some people have apparently even begun to have a vague sense of being attracted to people of the same or other sex. At the outset, it is clear that what is meant by all of these developmental events is defined by one's culture. This assertion is in no way meant to undermine or deny the impact of the various biological forces that begin to have their impact from conception on. Instead, it is to suggest that the ways in which biological variables exert their influence is modified, reduced, or enhanced by the attitudes and beliefs of one's parents, peers and subculture, and society. Before launching into a review of the relatively small data base on the development of sexuality in childhood, a broad overview may be helpful.

Contemporary scholars agree that gender identity is quite firmly established between the ages of 18 months and three years. Although differences are attributed to people on the basis of their gender in all known societies, the specific differences that are ascribed as a function of being male or female differ from one culture to the next, and currently in modern industrialized societies, from one generation to the next.

Nonetheless, there is still ample evidence to suggest that males are socialized quite differently from females, particularly in areas involving sexual expression. The extent to which sex education is taught, and the quality of that education, varies enormously from one family, and one society, to the next. Some barely provide labels for genital parts and avoid all discussion of issues such as physiological aspects of arousal and response, passion, the actual mechanics of conception, and so forth, whereas others provide a considerable amount of age-appropriate detail.

Ways in which to negotiate potential sexual relationships with others do not appear to be handled very openly in many Pattern I countries. According to some retrospective reports, some homosexuals (more commonly gay males than lesbian females) may begin to sense attraction to members of their own sex, or differences between themselves and other members of their own sex (Troidan 1988), toward the end of childhood, although they are unlikely to label these feelings until adolescence or early adulthood.

Sexual Rehearsal. Sexual play has been observed among many of the primates before they reach sexual maturity, and this play may serve as a rehearsal for adult sexual behaviour. Sexual play or rehearsal has also been observed in children in cultures in which it was not inhibited by adults (Ford and Beach 1951; Reiss 1986), and I observed some childhood sexual play among the So of Northeastern Uganda (Laughlin and Allgeier 1979). Another form of rehearsal for adult relationships and roles is very common in modern industrialized societies: playing house. Anecdotally, I have seen feminist parents challenge their daughters when they appear to be carrying out a very stereotypically feminine role (wearing an apron, bidding children and husband good-bye, while they remain at home to dust and prepare meals), but I have never observed parents suggest that their children rehearse sexual negotiation.

It would be very instructive to follow the offspring of a group of parents who encouraged such negotiation in role-playing regarding levels of sexual intimacy, joint decision-making about contraceptive use, and so forth, to see if these children are more adept at developing mutually satisfying romantic and sexual relationships during their adolescent or adult courtship experiences or both. There are obvious scientific and practical problems with such a study. Those parents, for example, who would agree to encourage their children to discuss their emotional and "erotic" feelings and to consider contraceptive options and STD prophylactics as part of their play would be quite unrepresentative of the population of most adults in contemporary Western societies. They would have presumably been giving sex education and encouraging the open development of sexual responsibility in a variety of other ways during their children's early life. Further, getting such a study through an ethics review board might prove to be an insurmountable task.

Sex Education. The quality and onset of provision of education about sexuality varies considerably among the Pattern I countries. In Jones et al.'s (1986) case study research on teenage pregnancy in 37 developed countries, variables were examined that might be related to unintended pregnancies among adolescents. The authors were attempting to understand why teenage fertility rates were so much higher in the USA than in most other developed countries. Based on their analysis of the 37 countries, six factors were identified as associated with variations in teenage fertility rates. High fertility rates were associated with:

- Low levels of socioeconomic modernization;
- Ambivalent or puritanical attitudes toward sex;
- A relatively small proportion of household income distributed to the low-income population (important mainly for younger teenagers);
- A low minimum legal age at marriage (important for older teenagers only);
- Generous maternity leaves and benefits; and
- Overall pronatalist policies designed to raise fertility.

Jones et al. (1986) noted that the USA differed on four of these factors from most of the countries with comparably high adolescent fertility rates.

The two factors on which the USA fit the pattern were on the dimensions of openness (or, more accurately, lack thereof) about sex and distribution of income to families low in economic resources. Jones et al. (1986) characterized the USA as "far less open about sexual matters than most countries with low teenage birthrates" (p.230), and they noted that the USA has a large, economically deprived underclass. The high adolescent birthrate among blacks in the USA does not account for the differences between the USA and most other countries, in that the birthrates of white teenagers are higher than those of teenagers in any Western European country. Their findings led them to conclude that these two factors are key to the USA's high teenage fertility, and they characterized the USA as having "an ambivalent, sometimes puritanical attitude about sex" (p.230).

Jones et al. (1986) used a number of factors to develop a quantitative index relevant to openness about sex, some of which would presumably contribute to the extent of information available to children about sexuality. These included condom ads

on television, in mass circulation newspapers, general interest magazines, other magazines, and billboards; complete female nudity shown in mass circulation magazines, prime time television, off-hours television; sale of sexually explicit literature in large cities; proportion of public beaches where complete nudity is common; government policy favouring teaching contraceptive methods in secondary schools, proportion of female students taught contraceptive methods by age 18; age that students receive contraceptive instruction in schools; percentage of 15-16-year-old girls in coed schools; public subsidy of abortions; and minimum legal age for consensual intercourse for girls.

Some of the other variables they measured that were not included in the list of dimensions included in the factor "openness about sex" could also be considered indices such as parental consent/notification required for single women under 18 to obtain nonprescription contraceptives. The scores derived for openness about sex by Jones et al. (1986) showed the following distributions among Pattern I countries: Sweden 16; Norway 16; the Netherlands 14; Denmark 14; Germany 12; Italy 12; France 11; Spain 11; Australia 10; Austria 10; Canada 10; Finland 10; Switzerland 9; England and Wales 9; Portugal 7; USA 7; Scotland 6; Belgium 5; New Zealand 5; Greece 4; Chile 1; and Ireland 1.

Jones et al. (1986) also focused on six countries in more depth, including the USA, Canada, England and Wales, France, the Netherlands, and Sweden. One of the variables examined was the onset and extent of the provision of sex education. In 1956, Sweden became the first country to mandate sex education as a compulsory part of the curriculum for school children. Beginning when they are seven years of age, children are taught about physical differences, sexual anatomy, menstruation, conception, contraception, and childbirth. Dealing with these and human relationship topics with increasing complexity, and including STDs and abortion, Swedish children are exposed to education about sexuality from the age of seven to the age of 19. It should be noted that there is a close tie between birth control clinics (or "youth clinics") and the school system. In fact, the clinics are normally open only during school days, and going to the clinic is considered a valid reason for absence from the classroom.

In Canada, England and Wales, and the USA, sex education is left up to local authorities, school principals, and teachers. Neither Canada nor the USA has any national policy regarding sex education, but England and Wales do have a national policy favouring education about sex and family life. France has a national policy mandating broad coverage of sexuality for all adolescents, although local decision-makers can interpret this policy as they see fit. The Netherlands constricts its school curriculum to education about reproduction, but subsidizes mobile education teams to teach contraceptive education. The age at which students receive contraceptive education varies from a low of 10 years old (Sweden) to a high of 16 (Canada) among the six countries studied in depth. The age in the other countries are England and Wales (age 13) and the Netherlands, France, and the USA, all at age 15.

Are variations in the provision of sex education associated with variations in sexual knowledge? Goldman and Goldman (1982) conducted a cross-national interview study with 419 boys and 419 girls aged 5, 7, 9, 11, 13, and 15 in four different areas: Australia, North America (Canadian and American communities around Niagara Falls), England, and Sweden. Their 63 questions related to six conceptual areas:

- The aging process and the best time to be alive;
- Parental identity and roles as mothers and fathers and as men and women;
- Children's perceptions of sex differences in the newborn and during puberty and their sex preferences;
- Explanations regarding the origin of babies and mothers' and fathers' roles in procreation, gestation, birth, and related processes including birth control;
- Children's ideas about sex education at home and at school; and
- Clothing and nudity.

Selection criteria for the children included the requirement that they have a younger sibling, and the majority of the children had a younger sibling of the other sex. The Goldmans developed a coding system partially based on the Piagetian cognitive development model for scoring responses to some of the questions, such as "How can anyone know if a newborn baby is a boy or a girl?" Answers were coded as Stage 1 if they involved irrelevant physical factors, authoritarianism, or artificialism (e.g., "Because mum dressed her in a dress," "He looks through a magnifying glass at their eyes, and he can

tell by the eyebrows"). Stage 2 answers involved semirecognized physicalisms (e.g., "shapes are different, dunno really"). Stage 3 answers involved physicalisms with named parts (e.g., "If it's got a penis or not... Girls have a virginia").

Given differences between Sweden's approach to sex and sex education, and that of the English-speaking countries noted earlier, it is not surprising that at the ages of five and seven, the majority of children in the English-speaking countries were still at Stage 1, despite the fact that most of them had a younger sibling of the other sex. Specifically, at age 5, 80% of Australian, 74% of English, and 88% of North American children were at Stage 1 compared to 43% of Swedish children. At age seven the rates were, respectively, 65%, 57%, 70%, and 26%. It should be noted that, although Swedish school children don't get exposed to formal sex education in the schools until they are seven, their parents were old enough at the time that the Goldmans conducted their study (late 1970s, early 1980s) to have participated in mandatory school sex education from an early age. They might, therefore, have been more likely than the parents from the English-speaking countries to provide accurate answers to the questions that most children begin to ask from the time that they become verbal (unless or until they are reprimanded for asking such "dirty" questions such as the names for boys' and girls' genital parts, etc.).

In marked contrast to the Swedish system, two studies of sex education in the USA present findings that can best be summarized by the phrase, "too little, too late" that was used in the Alan Guttmacher Institutes' press release for one of the studies (Kenney et al. 1989). In the Kenney et al. study, teachers in grades 7-12 (involving students aged about 12-18) from the 203 largest school districts in the USA were sampled. They selected teachers from five specialty areas that are most likely to offer sex and AIDS education in some form, including biology, health education, home economics, physical education, and school nursing. Most of the teachers believed that a wide range of topics related to pregnancy prevention, AIDS, and other STDs should be taught by the end of the 7th grade (student age, about 12) before most of the students have become sexually active. Only a third of the teachers reported that sex education is provided by that time, however. They also reported that they are given relatively little time to provide sex education; the average amount of time devoted to instruction relevant to sexuality is only 6.5 hours *per year*. Less than two of those hours focus on contraception and disease prevention.

Numerous surveys have shown that the majority of Americans support school-based sex education (Harris et al. 1988), and believe that sex education courses for 12-year-olds should include contraceptive education (77%) and information about homosexuality and abortion (67%). In spite of these findings, teachers in the Kenney et al. (1989) study indicated that the biggest obstacle that teachers must confront in providing sex education comes from pressure from parents, community groups, and school officials. They perceive such opposition as particularly problematic when covering topics such as condom use, abortion, safer sex behaviours, and homosexuality. Only half of those teaching sex education reported feeling that parents and the community supported their attempts to provide such education. In addition to their concerns about parental and community opposition, 80% of the teachers reported needing more assistance to provide effective education on contraception and prevention of STDs. Because of inadequate or out-of-date materials from state and district curricula, they must frequently develop their own teaching materials.

In a second survey sponsored by the Alan Guttmacher Institute, Forrest and Silverman (1989) found that almost all of the 4241 teachers in their sample believed that sex education covering pregnancy prevention, AIDS, and STDs should be provided during the 7th and 8th grades at the latest. In fact, sex education is generally not provided until the 9th or 10th grade. Further, the topics listed earlier are not necessarily covered, and only 48% of the students are in schools in which they are given information on where they can go to obtain contraceptives.

The Jones et al. (1986) study explored the issue of the extent to which societies are open versus relatively puritanical about sex. The other factor that emerges from the studies of teacher samples in the USA is that the emphasis in current sex education is on abstinence, rather than on sexual decision making, discussion of feelings of arousal and how to handle them, and safer sex practises.

Sexual Maturation. Two beliefs that are widely held need to be addressed because of their relevance to

models of sexual development during childhood and early adolescence. One of these is the so-called latency period. According to psychoanalytic theory, after proceeding through the oral, anal, and phallic stages of development in which sexual energy is concentrated in various portions of the body, children's sexuality is repressed as part of the resolution of the Oedipal/Electra complexes. That is, Freud posited that for boys, in the process of a castration-fear-driven incorporation of their father's moral values and development of the superego, sexual feelings go underground from the age of five or six until the onset of puberty.

The Goldmans' (1982) research with children from the age of 5-15, however, provides no support for the latency hypothesis. Instead, they found evidence of an increase in interest in sexual matters with increasing age. Based on their data, the Goldmans' stressed the importance of "emphasizing the latency period as a myth, because latency is an impediment to the early provision of sex education in home and school during the years of 5-11" (p.383). The Goldmans also reported that the vast majority of children in their sample believed that sex education should begin in elementary school, a finding that is not consistent with the latency hypothesis.

The second "misunderstanding" involves the secular decline hypothesis. According to this hypothesis, the age at menarche has been declining over the past 140 years from an average of 17 in 1840 to an average of 12 or 13 today (Eveleth and Tanner 1976; Tanner 1962). Accordingly, it has been suggested that decreases in the age at first intercourse and the large numbers of unwanted pregnancies among contemporary adolescents may be partially because of the decline in age of female reproductive maturity.

The problem with this explanation is that it rests on data from flawed samples. Specifically, Bullough (1981) examined historical records from ancient Rome up through the Middle Ages and found that menarche reportedly occurred between the ages of 12 and 15, on the average. He then examined the records on which Tanner based his secular decline hypothesis and found that only one sample contained women reporting an average age of 17 for menarche. These women came from a small isolated Norwegian area, and cannot be generalized to other women of that time period or even to Norwegian women as a whole. Further, cross-cultural data indicate that the average age of menarche varies between 12.5 and 14.5 for most of the world, about the same range that has been found throughout most of recorded history. Thus, the contemporary prevalence of unwanted adolescent pregnancy cannot be attributed to a decline in the age of menarche.

Sexual Orientation. At the outset, it should be noted that we do not yet understand why some individuals are attracted to people of the same sex, attracted to those of the other sex, or unbiased by the sex of a potential partner (bisexuals). However, it is common for children to engage in sexual exploration with those of the same and other sex (Martinson 1973). Further, homosexual experiences were reported by more than half the boys and more than a third of the girls aged 4-14 studied by Elias and Gebhard (1969). Sexual experiences with others of the same sex during childhood do not appear to be systematically related to the development of homosexual orientation in adulthood.

Several studies have reported a link between consistent cross-gender role identification in childhood and the subsequent development of homosexual orientation. Bell et al. (1981) explored the relationship of sexual orientation to a variety of psychosocial factors with a sample of 1200 adults from the San Francisco Bay Area. The only major link to emerge from their data was gender-role nonconformity during childhood. That is, those adults who reported gender-role nonconformity during childhood were more likely to be homosexually oriented than those who were more conforming vis-à-vis stereotype gender-role expectations.

The 15-year prospective study conducted by Green (1987) supports a similar conclusion. Those boys in his sample who were cross-gender identified, and who did not obtain therapy, were more likely to develop homosexual orientations than were those who did receive therapy, or who were masculine in their gender identity during childhood. Other researchers studying homosexual men have concluded that feminine boys have a much higher probability of homosexual orientation in adulthood than do masculine boys (Al-Issa 1987; Harry 1982; Whitam 1977).

As they move from childhood to adolescence, young people begin to notice and approach potential romantic partners. In many Western societies, this

involves a transition from a period of relative aversion to the other sex (the so-called homosocial phase) to the beginnings of interest and attraction to the other sex (heterosocial phase). Storms (1980; 1981) posited that orientation toward same or other sex partners is a combined function of the age at onset of puberty, the social phase one is in (homosocial or heterosocial), and the development of the capacity to fantasize or eroticize others. Specifically, he hypothesized that individuals who enter puberty while still in the homosocial phase are more likely to eroticize others of the same gender. There are some data to support his contentions for males, but not for females, and, unfortunately, there has been very little published research exploring his hypothesis during the 1980s.

To the extent that Storm's model rests on the universality of a homosocial phase coupled with aversion to the other sex during late childhood, however, it is noteworthy that Goldman and Goldman (1982) heard many more spontaneous comments indicative of aversion to the other sex from the English-speaking children than from the Swedish children in their sample. When sex education was mandated throughout the school years in Sweden in 1956, policies encouraging gender-role equality were also mandated, and it is possible that the phenomenon of the "homosocial phase" and aversion to the other gender is a by-product of cultures characterized by relative inequality of males and females. Research needs to be conducted in societies with extreme gender role inequality (e.g., some preliterate groups, traditional Muslims, etc.) to explore the relationship of relative male-female equality and the extent of childhood aversion to the other sex.

Before leaving the topics of childhood and homosexuality, a description of Sandfort's (1984) research on paedophilia is warranted for several reasons. First, it illustrates differences in the ease with which particular research questions can be addressed among the different Pattern I countries. Second, his findings have potential implications for the spread of AIDS via sexual transmission to boys.

In sharp contrast to the constraints placed on research with children and young adolescents in English-speaking countries by political issues and social norms, Theodorus Sandfort, a research associate at the Department of Clinical Psychology at the State University of Utrecht in the Netherlands, published an article reporting his research with a sample of 25 boys aged 10-16 (mean=13 years, 4 months) who were involved in paedophiliac relationships with men aged 26-66 years. In his attempt to address the question of whether or not sexual relations with an adult can be a positive experience for a child, he obtained a sample of boys with the help of their adult partners and the Paedophile Workgroups of the Netherlands Society for Social Reform.

Sandfort (1984) reported some difficulty in obtaining the cooperation of adult paedophiles in approaching their young partners to participate in the research. This was because the adults feared the effects on their young partners or were opposed to the research per se. However, Sandfort reported that "the final decision as to whether or not to cooperate in the research was always made by the child" (p.126).

From the standpoint of researchers working in English-speaking countries, Sandfort's research is remarkable from several perspectives. First, undertaking this kind of research in English-speaking countries would be extraordinarily difficult because of legal issues and ethical perspectives. In the USA, for example, professionals who are aware of adult-child sexual contacts are required to report these to local authorities. Thus, obtaining the cooperation of adult paedophiles in locating a young sample would be virtually impossible. In addition, children are not perceived to be capable of giving informed consent to participate in sexual relations with an adult (e.g., Finkelhor 1979) let alone to participate in research on their feelings about such sexual contacts. As an aside, I might add that children from 10 to 16 or 18 in English-speaking countries are not legally considered capable of giving informed consent to participate in any research, much less research involving sexuality. Also, from an ethical standpoint, I agree that children aren't capable of giving informed consent to participate in sexual relations or sex research, but part of the reason is that they are denied the basic information about sexuality required to be able to give informed consent.

The other remarkable aspect of Sandfort's (1984) article is that he ends it with an advocacy statement. He concludes that:

> ... Some sexual contacts exist between children and adults which are experienced in a predominantly positive way by the children and which the children report as having no detrimental effects on their sense of well-being. The adults

> did not, in the opinion of these children, misuse their authority (p.140).

Sandfort then states that:

> In my opinion, provisions which provide extra protection to children should not interfere with their rights of sexual self-determination, and this should include the right to accept as well as to refuse the sexual initiative of an adult (p.141).

It is extremely unlikely that such research could be conducted in North America, and researchers making such conclusions and advocacy statements (see also Sandfort 1987) would not retain professional employment. In fact, they might find their data confiscated and face a jail sentence, as experienced by Sonenschein (1987) when he attempted to conduct research on child pornography.

Although I strongly support the need for such research with samples of children, I do have misgivings about the advocacy portion of Sandfort's report. In only a few cases did the boys initiate the sexual relationships, and the behaviours involved included oral-anal stimulation and anal penetration. Given that anal contact is a high-risk activity for HIV infection and that most of the adult partners "had had a great deal of paedophiliac experience" (p.127) with more than one boy, advocacy of child initiation or acceptance of adult initiation seems more dangerous to the boys' welfare now than it may have seemed to Sandfort in the early 1980s. The number of adult partners of the paedophiles was not reported, but the likelihood seems low that a 10-year old boy would have enough knowledge of high-risk activities, the importance of condom and spermicide use, and so forth, to reduce his risk of contracting HIV.

Adolescence and Adulthood

During adolescence, young people begin to negotiate – however unconsciously – the process of developing sexual relationships with one another, armed with, or bereft of, basic information about sexuality. Most heterosexuals in modern industrialized societies form an ongoing relationship with another person at some point in their twenties. Although some people make relationship commitments during adolescence, teenage marriages are more than twice as likely to end than are marriages of people in their twenties (Norton and Moorman 1987).

Courtship. In Western societies, there is a strong stereotype regarding gender roles in heterosexual courtship. Specifically, it is assumed that males select particular females and initiate contacts (initial contact, "dates," kissing, hugging, and increasing levels of sexual intimacy). In contrast, it is believed that females are the passive recipients of such attempts and that their major role is that of "gate-keeper" in which they accept or reject the initiation attempts of males (McCormick 1979).

Stimulated by sociobiological theory and observations of animals, some researchers have begun to question the reality of the active male/passive female stereotype. Borrowing the term "female proceptivity" from research on animal copulatory patterns, these researchers have conducted observational research in natural settings or with self-report surveys in the attempt to understand gender roles in courtship. Perper (1985; see also Perper and Fox 1980) has spent many hours in singles bars along the eastern edge of the USA from Philadelphia to New York observing the courtship sequence. Based on these observations and on interviews with subsamples of those observed, he concluded that it is primarily females who initiate relationships with males. They are able to describe the behaviours they use to signal a man of their interest in having him approach, and they are quite conscious of the strategies that they use. In contrast, males seem to be relative "innocents" in the process and don't appear to be aware of the extent to which their sexual "outcomes" are affected by deliberate strategies used by the women.

In a more systematic examination of the same phenomenon, Moore (1985), also stimulated by a sociobiological perspective, conducted a series of studies aimed at developing a catalogue of signalling behaviours used by women to communicate their interest in having a specific man approach them. These behaviours begin with a "room-encompassing glance" when the woman enters a setting (bar, party, etc.) in which she is interested in locating a potential partner. A large number of other signalling behaviours were observed and catalogued (e.g., short, darting glances at the target male; fixed gazes; smiles; parading; approaches; and so forth). In subsequent research, she and her colleagues found an unusually high – for social science research – correlation of 0.89 between a female signalling a

target male to approach and a subsequent approach by the male. Further, the number of signals emitted by females varies as a function of the setting. That is, in situations in which heterosexual courtship initiations are likely such as bars, females signal at very high rates.

These signalling behaviours are relatively uncommon in settings such as groups composed exclusively of women. Female proceptivity has also been studied using self-reports in essays or questionnaires. In several studies with American and Canadian university student samples (McCormick 1979; Gaulier et al. 1986; Perper and Weis 1987), students have been asked what they do to seduce or to avoid seduction attempts by partners. The female proceptivity that was observed in natural settings by Perper (1985) and Moore (1987) also appears in these studies using quite a different methodological approach. For example, Gaulier et al. (1986) found that females were more likely than males to report behaviours that indicated a signalling of initial interest in a potential partner.

In terms of heterosexual transmission of HIV, adolescent and adult females would be an important group to target for training in sexual negotiation to obtain enough information about a potential partner to know their level of risks of negative consequences *before* becoming sexually intimate. That is, females are adept at signalling males that they are possibly interested in becoming involved, but they may lack negotiation skills needed to protect themselves. For many years, I have given didactic lectures in my large sexuality class on identifying one's sexual policies (e.g., the conditions that are necessary for one to become sexually intimate with a partner), discussing these policies and issues with potential partners (e.g., protection from unwanted conceptions and STDs, differential expectations for a relationship in which one person is interested in a one-night stand, and the other thinks that he or she is embarking on a long-term relationship, and so forth).

Today, most sex education simply gives factual information about reproduction, contraception, STDs and so forth, but does not deal with arousal, how to negotiate, and how to give and receive informed consent. Such education may not be providing young people with the skills which they need to develop their sexual policies, make wise decisions, and discuss relevant issues with potential partners. Although I advocate more in-depth sex education that helps people to handle their sexual feelings and decisions in ways that increase their satisfaction and decrease negative consequences of unwise decisions, some people continue to believe that sex education promotes early sexual involvement.

Sex Education to Sexual Experimentation. One of the concerns expressed by people who oppose school-based sex education is that it will promote early sexual experimentation. Data from a nationally representative sample of adolescents aged 15-19 in the USA (Zelnik and Kim 1982) showed:

- No relationship between exposure to sexual and contraceptive education and age at first intercourse;
- That contraceptive use was more likely at first intercourse and subsequently by those who had (versus those who had not) received sex education; and
- That unplanned pregnancy was less likely among those who were exposed to sex and contraceptive education.

In the Jones et al. (1986) in-depth study of six countries (see Table 1), the ages and frequency of sexual intercourse were presented where data were available. As Jones et al. (1986) note these data should be interpreted cautiously because of differences in methods of sampling, wording of questions, and so forth.

Interpretation of the data in Table 1 needs to take into account differential, unwanted adolescent conceptions and these will be discussed shortly. These data do not support the hypothesis that it is the provision of comprehensive sex and contraceptive education beginning during prepubescence (more common in the countries outside of North America) that leads adolescents to begin sexual experimentation at earlier ages.

Decreasing Age at First Intercourse. Although there are a few conflicting data, it is the general consensus among researchers that the age at first intercourse has been declining, particularly in the period from the 1960s to the 1980s. Based on their review of 35 studies involving data collection from 1903 to 1980 with college-aged youth in the USA, Darling et al. (1984) concluded that there has been a major increase in the proportion of young people reporting premarital intercourse. In addition, the percentage

of females reporting intercourse has increased more rapidly than the percentage of males.

A recent study that provides data on the behaviour of Canadian adolescents was conducted by King et al. (1988). This research, called the "Canada Youth and AIDS Study" (CYAS) involved a cross-sectional sample of 38,000 young people aged 11-21 years, in grades 7, 9, 11, and 1st year college and university students. The sample also included adolescents who had dropped out of school or those who spent most of their time on the streets of large cities. By the 9th grade, 31% of the males and 21% of the females had had sexual intercourse. Corresponding rates for the 11th grade are 49 and 46; for dropouts, 89 and 81; and for college and university students, 77 and 73%, respectively. These recently collected data suggest decreases in age for onset of intercourse in Canada that have been seen in studies conducted in other Pattern I countries.

Beeghley and Sellers (1986) argue that the rising rate of premarital sex in the USA during this century can be accounted for by changes reflecting progress in American social structure. The gap between puberty and marriage has increased, allowing more time for sex to occur. They suggest that the pervasiveness of sex in the media and at home provides young people with role models who teach about sex. The increase in social autonomy of the young allows more opportunity for sex, while medical advances and legal changes have made it easier to prevent pregnancy. Egalitarian sex-role norms have decreased the double standard, which means that sex need not be withheld during courtship, and the norm of premarital sexual abstinence has declined.

The King et al. (1988) CYA study also suggests a decrease in age at first intercourse among Canadian youth when compared to the data from Herold's (1984) review of the literature. The same conclusion was reached by Earle and Perricone (1986) who gave Likert-type attitude surveys of 793 undergraduates in 1970, 1975, and 1981 at an American college. They found significant increases in rates of premarital intercourse, and decreases in average age at first experience. Although attitudes toward premarital intercourse and behaviour (i.e., reported coitus) were interrelated, this relationship was significantly stronger for women than for men. Differences between men and women still existed, but these differences were found to be much more evident in attitudes than in behaviour: women were still more conservative than men in their attitudes toward the kinds of relationships in which coitus is acceptable.

Several studies conducted in England, Wales, and Scotland provide a similar picture of decreases in age at first intercourse (Dunnell 1979; Bone 1986). In Bone's interview study with a representative sample of 3400 Scottish women aged 16-54, younger ages for first premarital coitus appeared with each five-year cohort of women from those born in 1926-30 to those born in 1961-65. A rather striking finding from this study, however, is that even among the youngest cohort, very small percentages have intercourse at ages 15 (1%), 16 (4%), or 17 (16%). In fact, it is not until the age of 20 that the majority (61%) have had premarital coitus. These data contrast rather sharply with the data presented for North American and other countries shown in Table 1.

In contrast to the picture of declining ages at first intercourse, both Story (1985) and Gerrard (1987) have concluded that there has been a move toward sexual conservatism and increasing ages at first intercourse among their American university students from the 1970s to the 1980s. In both cases, however, samples sizes were small (i.e., about 100 student responses in the 1980s were compared with student responses in the 1970s in both studies), so generalization problems may not warrant giving much weight to these studies showing increasing conservatism among USA students.

There have been attempts to encourage young people to postpone early sexual involvement. In one such attempt, Howard (1985) administered a program during 1982-83 to 1043 American adolescents living in Cleveland and Atlanta, most of whom were aged 11-15. These young people participated in a field test of an educational series designed to help them recognize and resist the social and peer pressures that may lead to early sexual involvement.

Early tests of the four sessions led to revision in the Postponing Sexual Involvement (PSI) program by simplifying the concepts as pilot students appeared to be very concrete in their thinking. Of those who attended the first session, nearly 90% attended the second and third sessions. For the fourth session, however, there was considerable attrition, with less than half of the original participants attending. Howard attributed this partially to the fact that the school year had ended.

During the first PSI group session, participants were asked why they thought teenagers became sexually involved. Peer pressure was the most frequently cited reason, followed by fun or enjoyment, and the desire to be grown up. Asked why they thought teens should postpone having sex, the most frequently cited reason was pregnancy, followed by "too young to have sex," followed by the possibility of getting an STD. Cartoons, skill-building exercises, assertiveness training, and role-playing to resist pressures to have sex were used in subsequent sessions.

During the fourth session, the students were asked if they had become more aware of pressures to become sexually involved. Over half said yes, and cited pressure from television as the single greatest source. This is ironic, in that as noted earlier, the USA is relatively low in openness about sex in the media, and it underscores a position taken by Planned Parenthood and other groups. Specifically, they suggest that when sexual activity is portrayed or suggested, the potential consequences (e.g., unwanted conception and disease) should also be portrayed. Over half of the participants indicated that what they had learned in the PSI program was helpful to them in saying "no."

Follow-up questionnaires were administered between six months and two years after students' participation in Howard's (1985) PSI program. The attrition rate was so great at this stage, that, as the author acknowledged, conclusions should be interpreted very cautiously: 13% of the original sample of females and 4% of the males responded. After participation in the PSI group, 63% reported that it had become easier to stand up for their own point of view in discussions of sexual involvement. Actual resistance to sexual involvement was reported by nearly 83% of the 53% who had had an opportunity to have sex, whereas 17% had had intercourse (47% reported that they had not had the opportunity to have sex. Based on these findings, Howard reported that a revised PSI program was being offered in the Atlanta public schools, and to an additional 60,000 youths in Georgia in a state-wide program. It will be interesting to see the results of this expanded program; it is also interesting that the emphasis of the PSI program appears to be on a "Just Say No" approach rather than on helping teens to develop negotiation skills for engaging in mutually satisfying and safer sex practices.

Sexual Attitudes and Behaviours. There appears to be widespread acceptance of sexual intercourse in the context of an affectionate and loving relationship (but not necessarily involving marriage or leading to marriage) in Pattern I countries. Much of the research on which this conclusion is based, however, has involved college student samples and such samples are likely to contain a restricted range of people in terms of socioeconomic status (SES). The Kinsey group's studies (1948, 1953) suggested that SES was correlated with sexual attitudes and behaviour, with highly educated people engaging in a wider range of sexual behaviours than characterized less well-educated people.

Several more recent studies indicate that the effects of SES are no longer apparent. McCabe's (1987) sample of 1637 Australian young people aged 16-25 included a broad range of young people. The majority of them came from high schools (N=600) and a university (N=646). The remainder were unemployed youths, trained nurses, or came from sporting, craft, and debating groups. The percentage of people coming from upper, middle, and low socioeconomic classes was relatively similar.

Using a questionnaire to assess desired and experienced levels of dating, commitment and sexual intimacy, McCabe found no sex or age trends in either desired or experienced level of affection during dating. One of the surprising results to emerge from the study was that men were reluctant nonvirgins as frequently as were women, although percentages were generally low (range of 2-16%) at each stage of commitment (first date, several dates, going steady). McCabe noted that her findings of a single standard by men and women of permissiveness within a loving, caring relationship is consistent with results obtained with a number of USA samples; however the extent of sexual experience does not appear to be as high among Australian youth as it is in USA samples.

Consistent with McCabe's (1987) conclusion with Australian students regarding the absence of differences as a function of SES, DeLamater and MacCorquodale (1979) sampled college students and noncollege students of the same age. They obtained few differences between the two samples in sexual attitudes and behaviours.

Among French students (mean age 20 years) surveyed by Bonierbale-Branchereau (1985) with an anonymous 44-item, multiple choice questionnaire to determine sexual practices and behaviour and

attitudes toward sex, the mean age at the first sexual encounter was 17 years for both males and females. The value placed on virginity for females, connected with religion and morality, appeared to be decreasing. The main incentive for sexual intercourse was amorous feelings.

In their study of the sexual attitudes of Valencian University undergraduates aged 17-43, Lafuente Benaches and Valcarcel Gonzalez (1984) investigated the possibility of differences in values as a function of sex, age, religion, and political orientation. No significant correlations emerged as a function of sex in attitudes concerning premarital sex, abortion, masturbation, or homosexuality. The remaining predictors – age, religion, and political orientation – were related to approval of these behaviours, with more religious and conservative respondents showing greater disapproval. With respect to age, results indicated that younger and older students disapproved of premarital sex and abortion, whereas students aged 20-25 years showed more approval.

Several studies have investigated the factors related to decisions (or sexual policies) to engage in initial intercourse. An inventory of potential influences was administered by Christopher and Cate (1985) to American undergraduates to uncover factors that virgins believe will influence their decision to engage in their first act of sexual intercourse. Three anticipated influence factors emerged from a factor analysis of students' responses: a physical arousal factor; a relationship factor; and a circumstance factor.

Females rated the relationship factors as significantly more important than males did. However, physical arousal was perceived to be an important influence on the decision to have initial coitus with a casual dating partner and, in contrast to previous research (e.g., Ehrman 1959; Knox and Wilson 1981), these male and female virgins did not differ in the ratings they gave to the physical arousal factor. In a subsequent study, Christopher (1988) found that more than 50% of 275 single college women reported being pressured into varying degrees of sexual intimacy by (in order of decreasing frequency) persistent physical attempts, positive statements, threats of force, or actual force. These findings underscore the importance of providing negotiation skills for dealing with feelings of arousal in making decisions about sexual intimacy.

In a comparison of sexual attitudes, knowledge, and behaviour between Mexican-American and Anglo students by Padilla and O'Grady (1987), the effect of ethnicity was assessed controlling for students' age, gender, religious preference, and socioeconomic status. Significant differences were obtained between Mexican Americans and Anglos in that the Mexican Americans held more conservative sexual attitudes and values, had less accurate sexual knowledge in attitudes, were less sexually experienced, and had had fewer sexual partners.

Number of Partners. The number of sexual partners one has is correlated with the risk of contracting HIV and other STDs. In the USA, about half of adolescent girls who have had intercourse report having had more than one sexual partner, and between 8 and 11% report having had six or more partners (Zelnik and Kantner 1977; Zelnik 1983). The rates are even higher for adolescent males: of those who have had intercourse, 7% of those aged 17, 24% of those aged 19 years, and 26% of those aged 21, reported having 10 or more partners (Zelnik 1983). In their sampling of college students at a USA university in 1970, 1975, and 1981, Earle and Perricone (1986) found that the percentage of students reporting having had five or more partners increased for both males (13, 18, and 18%) and females (0, 6, and 8%). There was a corresponding decrease over the three sampling periods in the percentage of males and females reporting having had intercourse with only one partner.

Two surveys conducted more recently and reported in Gagnon et al. (1989) asked a wider age range of respondents to report the number of sexual partners that they had had in the past year. One of these involved a telephone survey conducted by the *Los Angeles Times* with a national sample and an oversampling of Los Angeles, Miami, New York City, Newark, and San Francisco – the USA cities reporting the greatest numbers of AIDS cases (Turner et al., in press). The other survey, sponsored by the National Institute of Child and Human Development (NICHD), and the National Opinion Research Center (NORC) involved both interviews and questionnaire administration to a probability sample of noninstitutionalized American adults (Michael et al. 1988). As summarized by Gagnon et al. (1989, paraphrased from p.105 and 108), major findings emerging from preliminary analyses of these data *for the previous year* are as

follows:

- Of unmarried men and women aged 18-24, only 19% of women and 16% of men reported being without a sexual partner;
- Of unmarried men and women aged 18-24, 40% of the men and 15% of the women reported three or more partners;
- About 1% of the women and 6% of the men aged 18-65+ in the samples reported nine or more partners;
- About 5% of married men and 1-2% of married women aged 25-49 reported two or more partners;
- Of unmarried respondents who described themselves as strongly religious Christians in the *Los Angeles Times* survey, 66% of the men and 40% of the women reported at least one sex partner, and 26% of the men and 12% of the women reported two or more partners.

Two aspects of these data are surprising. One of these, to be discussed in more detail, is the absence of the purchase of condoms among many members of the sample reporting multiple partners; the other is that the data were collected *after* information about sexual (including heterosexual) transmission of HIV had been widely publicized. The *Los Angeles Times* survey was conducted in July 1987, and the NICHD/NORC data were collected between February and April of 1988.

Differences in numbers of sexual partners in the large, previously described King et al. study of Canadian youth indicated considerable discrepancies between university respondents versus dropouts. Among the sexually experienced males and females of each sample, 23 and 36% of the university sample versus 15 and 23%, respectively, of the dropout sample reported having had only one sexual partner. Eleven or more partners were reported by 19% of the male and 7% of the female students versus 27% of the male and 13% of the female dropouts. These differences, combined with the fact that the dropouts were more frequent users of drugs (alcohol, marijuana) that might be expected to impair the judgment needed to engage in safer sex practices) would suggest that the dropout sample is at greater risk of contracting AIDS and other STDs than the university sample.

Behaviour Toward Contraception and Reproduction. The variations in Pattern I countries in the provision of sex education, and contraceptive information and devices, discussed earlier are correlated with subsequent rates of unwanted conceptions. In their cross-national study of 20 countries including Canada, the USA, Australia, New Zealand, and Western Europe, Jones et al. (1988) found the USA distinct from most of the other 19 countries in its provision of contraceptive information and methods and in its rate of unwanted pregnancies and abortions.

Following up on the 1986 work done by Jones et al. on adolescents, they focused on adults in these 20 countries and attempted to determine the role of the family planning delivery system, public policy, and legal restrictions on rates of contraceptive use, unintended pregnancy, and wanted conceptions. Jones et al. then examined four of the countries (the USA, Canada, Great Britain, and the Netherlands) in more detail, using the case study approach. They focused on the years 1982-86, but drew on earlier studies for a few countries for which later data were unavailable. Greece and Ireland had the highest total pregnancy rate – average number of births plus abortions – (4.3 and 3.2, respectively) of any of the countries. Greece also had the highest abortion ratio; that is, just over half (53%) of pregnancies were terminated by abortion. In contrast, Ireland (where abortion is illegal) had the lowest abortion rate (0.15 per woman) and the highest fertility rate (3.1). The Netherlands has a relatively high planned pregnancy rate (1.4) but a low overall pregnancy rate (1.7) because only 17% of their pregnancies are unplanned. In contrast, more than half of all pregnancies are unplanned in Finland, France, and the USA.

A comparison of Finnish women aged 18 who did or did not use oral contraceptives revealed some interesting differences that have potential implications for contraceptive socialization. To begin with, the author (Rauste-von Wright 1987) sent a questionnaire to the parents of participants in the study when the participants were aged 15 asking about the parents' educational values for their offspring. The parents of the offspring who subsequently became oral contraceptive users (OC group) emphasized more strongly the importance of their children growing into happy, well-balanced, and independent persons than did the parents of the offspring who were not using oral contraceptives (N group). The OC group women, compared to the N group women had more positive contacts with

people including mothers and same-sex friends, reporting that they could discuss a number of topics including personal issues. The OC women rated their home atmosphere more positively, and their self-esteem was higher than the N group women. Unfortunately, the author did not report whether the N group women were using no contraceptives or were relying on forms other than the pill. Among the French students studied by Bonierbale-Branchereau (1985) no contraceptive use was reported by 69% of the females and 60% of the males during initial intercourse.

In the USA, several studies have shown that attitudes toward sex are correlated with the likelihood of using contraception. Kelley et al. (1987) investigated the relationship among sexual attitudes, sexual and contraceptive behaviour, and responses to statements about sexual topics with a sample of 722 female undergraduates from five universities. The women were administered a sexual opinion survey dealing with sexual and contraceptive behaviour and semantic differential items involving sexual matters. Those who felt negatively about various aspects of sexuality were less likely to use contraception than were those who felt positive toward sex. Similarly, Allgeier et al. (1977) found that high sex guilt students took an average of 15 months after the onset of coitus to begin to use a reliable contraceptive consistently, as compared to a lag period of three months for students who were low in sex guilt.

The timing of initial coitus appears to be related to the likelihood of contraceptive use. Faulkenberry et al. (1987) investigated coital behaviour, contraceptive practices, and attitudinal and knowledge differences between early coital initiators (those having initial coitus at 16 years or younger) and late coital initiators (those having initial coitus from 17 to 20 years of age) through a questionnaire administered to 929 American college students at 14 colleges and universities. Results suggested that, compared to their younger counterparts, late coital initiators were:

- More effective contraceptors during initial coitus;
- Had more committed relationships with their initial sex partners;
- Engaged in more discussion about and planning for contraceptive use; and
- Used more authoritative and reliable sources for contraceptive information.

Both groups, however, were very low on basic knowledge on questions concerning fertility, contraception, and STDs.

Rates of contraceptive use appear to be much higher and rates of unwanted conceptions and births are lower among those countries with relatively open attitudes toward sex and that provide thorough sex and contraceptive education beginning in elementary school (Trost 1987). In Sweden, for example, teenage (ages 15-19) birth rates for 1983 were 11 per 1000 women, as compared with 52 per 1000 in the USA. Data from Denmark are very similar to the Swedish rates. The discrepancy in birth rates cannot be explained by differential tendencies to obtain abortions. The abortion rates per 1000 women for Sweden and the USA for 1983 were 18 and 42, respectively. Data from Denmark on birth and abortion rates are very similar to the Swedish rates (Trost 1987).

In what is perhaps an apt metaphor relating the use of contraception to attitudes toward sexuality and the freedom and independence of women to the use of contraception in Pattern I countries, Korovkin (1986) has written a very interesting analysis of the several meanings of oral contraceptives among people in a patriarchal, semiagricultural, hill town in eastern Basilicata, Italy. For some of the citizens, notably, married men ("A husband...is similarly victimized by the immaculate misconception of the pill," p.82), the pill is threatening to the corporate family and traditional values because it symbolically absolves women and dismisses men, thus allowing the introduction of broadened boundaries for women. For other citizens, notably single and some married women, the pill is a symbol of freedom, modernity, and social integration of communities of women. Many of these women, however, obtain both information and the pill from other women covetously, rather than seeking advice and oral contraceptives from medical personnel. Thus, it is frequently used in an ineffective manner.

Condom/Spermicide Use. Because the use of condoms reduces the likelihood of transmission of HIV, and because use of a spermicide containing nonoxynol-9 increases the protective effect from HIV of barrier methods, I will focus briefly on the data available on this issue.

In the previously mentioned analysis of the meanings of pill use in a largely Catholic Italian

village (Korovkin 1986), the most widely used and effective methods of pregnancy prevention are condoms and withdrawal. Both of these methods, of course, give men considerable power over the timing and frequency of conception. In Padilla and O'Grady's (1987) study, compared to the Anglos, Mexican Americans (who were generally more traditional and less sexually experienced) were more likely to report having used a condom.

Condom use has quite a different meaning in Sweden. Condoms are readily available from grocery stores, barbershops, and gas stations, as well as in school clinics. In addition, they may be purchased anonymously by mail.

Within the USA, Fisher et al. (1977) found that those college students who had more positive attitudes toward sexuality reported less discomfort, anxiety, embarrassment, and so forth, when sent to a drugstore to purchase condoms than did students with more negative attitudes toward sexuality. Presumably, attitudes toward sexuality would be similarly correlated with reactions to instructions to purchase condoms for STD risk reduction, although I know of no study that has investigated this hypothesis among either heterosexuals or homosexuals..

Sexual Orientation. Perhaps one of the reasons why HIV infection has disproportionately affected members of the gay communities of Pattern I countries is that before the advent of AIDS, there would have been no reason for gays to use prophylactic methods for contraception – in particular, the barrier methods and nonoxynol-9, whereas heterosexuals in these largely modern, industrialized countries would be motivated to use these methods to avoid conception. Although it is clear that heterosexual adolescents in North America tend to begin their sexual experience without contraceptive protection, as they become more experienced, contraceptives are widely used throughout most of the Pattern I countries.

Within the USA, gay males are stereotyped as seeking variety through having large numbers of different partners (one of the high-risk behaviours). Although that is true for some homosexual men, other homosexual men have developed ongoing, stable, monogamous, or relatively monogamous relationships with a partner (McWhirter and Mattison 1984). The actual proportions of men forming stable monogamous relationships versus those who frequently change partners is not known, as we have no representative samples of the relationships of gay people.

Foa et al. (1987) evaluated the attitudes toward the relationship between love and sex by American versus Swedish heterosexuals versus homosexuals. The Americans (N=390, aged 20-35 years) and Swedes (N=179, aged 19-40 years) sorted a list of love, sex, and service behaviours into love and sex categories. Differentiation of love and sex was stronger in males than in females, in homosexuals than in heterosexuals, and among Americans than among Swedish participants.

Based on several years of field work in homosexual communities in the USA, Guatemala, Brazil, and the Philippines, Whitam (1983) reached six tentative conclusions about cultural invariability:

- Homosexual persons appear in all societies;
- The percentage of homosexuals in all societies seems to be about the same and remains stable over time;
- Social norms do not impede or facilitate the emergence of homosexual orientation;
- Homosexual subcultures appear in all societies given sufficient aggregates of people;
- Homosexuals in different societies tend to resemble each other with respect to certain behavioural interests and occupational choices; and
- All societies produce similar continua from overtly masculine to overtly feminine homosexuals.

Implications for this interpretation of homosexuality include the notion that homosexuality is not created by social structural arrangements, but is rather a fundamental form of human sexuality acted out in different cultural settings.

The generally homophobic attitudes of North Americans have been widely documented (see Allgeier and Allgeier 1991 for a review) and will not be discussed here. It will be noted that in response to the notion that HIV is God's way to punish homosexuals for "immoral acts," there is a currently popular statement among people who are more tolerant of diversity to the effect that if God is using AIDS to punish gay males for their activities, then lesbian females must be among God's chosen, as HIV infection among lesbians is very low and generally caused by risk factors other than sexual transmission.

The correlates of decriminalization of same

sex contacts was studied by Sinclair and Ross (1985) who compared questionnaire responses from gay males in two Australian states: Victoria (before decriminalization of homosexuality) and South Australia (eight years after decriminalization). Decriminalization was not correlated with any increase in the negative aspects of homosexuality, such as public solicitation or STDs. Sinclair and Ross concluded that as a consequence of decriminalization, the psychological adjustment of homosexual men will increase and STDs and public solicitation will decrease.

Problems in defining sexual orientation have been noted by numerous authors (e.g., Kinsey et al. 1948; A. Freud 1953; Marmor 1980; Storms 1980, 1981; Bell et al. 1981) in the context of North American populations. These discussions have focused on the issue of whether behaviour or feelings should be used to categorize individuals, what proportion of the time one is involved with or attracted to people of the same or other sex, and so forth. Not unlike the traditional practice used in defining people as "Negro," if they have even one great-grandparent who is black while the other great-grandparent is white, it has been common for laypersons to define these individuals as black, even though only 1/8th of their genetic heritage has come from Negroid ancestry. Similarly, it is common to label a person as homosexual (or "queer," "faggot," and other derogatory terms) if the individual is known to have had a couple of homosexual encounters in an otherwise heterosexual history. Carrier (1985) has suggested that even one adult homosexual act may threaten the masculine gender identity of American males and raise the question of their sexual orientation.

When one ventures outside of North America to Mexico and South America, however, the issues surrounding definitions become more complex. The definition of sexual orientation is even more tied to stereotypic gender roles than is characteristic in North America. Based on structured interviews with Mexican males, most of whom had had sexual relations with both men and women, Carrier (1985) found that the men's definitions of their sexual orientation was based on the role they took in their sexual relations with other men. Masculine gender identity remains intact among those who take the inserter role; only the insertee – that is, the male taking the receptive role in sexual acts – is considered to be homosexual.

Carrier concludes that bisexual behaviour is more common among Mexican males than among American males, partially because of the lack of stigmatization of the partner in a homosexual encounter who takes the "masculine" (inserter) role. Anal intercourse with female partners is commonly used as a contraceptive measure, and as a way of preserving a female's "virginity" (Taylor 1974). Anal intercourse is also the preferred homosexual practice, with the anus likened to a vagina. Taylor (1986) has described nine different roles that can potentially be taken by a man who engages in sexual encounters with other men. This elaborate taxonomic system is in contrast to the generally trichotomous view in North America of people as either heterosexual, bisexual, or homosexual. It demonstrates the importance of being aware of cultural variations in views of the meaning of various sexual acts with people of the same or other sex.

Based on field research done from 1982-86, Parker (1987) has examined HIV-transmission potentials in a number of Brazilian subcultures. Similar to the distinctions between the "masculine" and "feminine" roles in male-male contacts described by Carrier (1985) and Taylor (1986) for Mexico in which the inserter retains his masculine identity whereas the recipient is stigmatized as less than masculine, Brazilians view the recipient of male-male contacts as "something of a failure on both social and biological counts" (Parker 1987, p.161; see also Fry 1985; Parker 1985).

Specifically, the male recipient of anal penetration is not really a man because of his adoption of the feminine receptive role, and he is further derogated because he doesn't have feminine anatomy. Thus, his status is even less than that of women! Further, heterosexual activity involving primary partners and prostitutes includes anal intercourse, providing an effective route for HIV infection of women. Again, as with Mexican women, anal intercourse by Brazilian men with young Brazilian women is employed to maintain their virginal status by avoiding rupture of the hymen and unwanted conception.

Prostitution. By definition, prostitutes have large numbers of sexual partners; thus the prostitute-client dyad may provide a potential source of HIV transmission. Clients of prostitutes have received very little research attention (Gagnon et al. 1989).

In two recent studies, under 2% of the men who were in no other high-risk group, but who reported sexual relations with prostitutes in the USA, were found to be HIV positive in studies conducted by Chaisson et al. (1988) and Wallace et al. (1988). Oral sex was the most common sexual practice reported by 340 clients of prostitutes in the Wallace et al. research, and 45% reported that they never used condoms with prostitutes.

Some evidence that the use of prostitutes is declining is suggested by differences in the proportion of men (69%) reporting such activity to the Kinsey group (1948) versus 19% in the men 34 or younger in Hunt's (1974) study. These data should be interpreted cautiously, however, because of the different samples employed and the very high refusal rate for participation in Hunt's study of sexual behaviour.

The behaviour of Columbian college students enrolled in his classes has been surveyed by Alzate (1989) every five years (1975, 1980, 1985). The proportion of male students who had had experience with prostitutes declined in each time period (92, 74, and 65%, respectively).

As noted earlier, large numbers of partners is one of the high-risk behaviours for contracting HIV, which places prostitutes in a high-risk group. Prostitutes may also be at risk because of histories of other STDs (Darrow 1983). In Central and East Africa (among the Pattern II countries), prostitutes have been found to have antibodies to AIDS at high rates (from 27 to 88% of various samples) and thus in a position to transmit AIDS to subsequent partners. In these countries, AIDS antibodies are more prevalent in prostitutes of low than of high socioeconomic status (Kreiss et al. 1986; Quinn et al. 1986). A third risk factor for prostitutes is the use by some of them of intravenous (IV) drugs. In the New York City area, about half of street prostitutes had injected drugs at least once, and a third of them had used IV drugs at some time in the 2 years before a survey conducted by DesJarlais et al. (1987).

According to Gagnon (1977), prostitutes in Western societies who serve working-class clients are more apt to be asked for "straight sex." In contrast, men from the middle and upper classes are more likely to request more experimental sexual activities. Many prostitutes attempt to have oral sex rather than intercourse with their clients because of the decreased level of effort and increased higher payment (Gagnon et al. 1989).

In a study of HIV infection among 1456 prostitutes in eight locations in the USA, about half had used IV drugs. Of those women, 21% tested positive for HIV. In contrast, only 5% of the non IV drug users were HIV positive (Darrow 1988).

Condom use by prostitutes is more common in their professional relationships than in their personal relationships (Darrow 1987). With clients, condoms were always used by 38% of the prostitutes interviewed by Cohen (1987), whereas 10% never used them with clients. In contrast, only 14% of the prostitutes reported condom use with husbands or lovers.

Within the USA, the arrest rate for prostitutes under the age of 18 has jumped rather dramatically from 677 arrests in 1966 to 2837 in 1983. It is not known if this represents an increase in the number of young prostitutes or an increase in attempts to prosecute them. However, the USA General Accounting Office estimated that there were as many as 2.4 million adolescent prostitutes in the USA, many of whom were runaways as young as 12 or 13 years old.

Male prostitutes may service women (gigolos) or men. Male prostitutes with male clients provide their services on the streets or in gay baths or bars. They are more likely to work part-time than are female prostitutes (Luckenbill 1985).

MacFarlane (1984) collected interview and questionnaire data on the racial distribution, family background, sexual history, education, and employment status of 27 New Zealand male-to-female preoperative transsexual prostitutes aged 15 to over 35 years. These transsexuals lived in Wellington, New Zealand, and Sydney, Australia. An early history of homosexual intercourse and cross-dressing behaviour was common. The Maoris, who form 9% of the total New Zealand population, were disproportionately represented; about 90% of the transsexual prostitute population in Wellington is Maori.

AIDS and High-risk Sexual Behaviours. In general, sexual contacts with large numbers of partners unprotected with a condom and nonoxynol-9 place one at risk for contracting HIV from an infected partner. Particular acts that increase the likelihood of producing abrasions such as receptive anal intercourse appear to pose greater risk than such acts as vaginal intercourse or oral sex, although HIV

can be transmitted during those acts as well.

The first cases of, and deaths from, AIDS in Brazil were not confirmed until 1983, two years after the identification of AIDS cases in the USA. By 1986, however, Brazil was in second place (the USA occupied first place) among Pattern I countries with the highest incidence of AIDS outside of the Pattern II (e.g., Africa, etc.) countries (Parker 1987).

Danish male homosexuals (N=259) were interviewed to obtain the first quantitative data from Scandinavia on lifestyle factors of possible importance for their health (Ebbesen et al. 1984). The frequency of various sex acts, frequency of change in partner, visits to the USA, sexual contacts with AIDS patients, education, smoking and drug habits, and recent medical problems were recorded.

Of those interviewed, 170 were from the Danish capital, Copenhagen, and 89 were from a smaller town, Aarhus. Sexual habits and most other factors were very similar in men from the two cities. The sex habits of those who had visited an STD clinic were similar to those of the group as a whole except for a frequent change of partners. Data on level of sexual activity resembled those available for the San Francisco Bay area of 1970.

The Copenhagen men, however, compared to the men from Aarhus, had more partners per year, had more sexual contact with USA citizens and AIDS patients, and were more likely to have inhaled nitrates. The frequency of STDs was the same in the two groups, but the Danish cases of Kaposi's sarcoma and AIDS all had come from the Copenhagen area. The longevity of homosexual activity in Copenhagen was longer (median 12 years; mean, 14 years) than for the Aarhus sample (median, 7 years; mean 9 years). Number of male partners during the past year was also greater in Copenhagen (median, 12 partners; mean 28 partners) than in Aarhus (median, 7 partners; mean 18 partners). In Copenhagen and Aarhus, respectively, 8 and 9% reported that they had been monogamous during the past year, but 5 and 2% claimed to have had at least 100 sex partners during the same one-year period.

Among the men with greater numbers of partners, all forms of homosexual acts were commonplace and 95% had been involved in anal intercourse. Of these, about 33% were more active as inserters, 33% were more active as insertees, and the remaining 33% were equally active in both ways. Ejaculation generally occurred with intercourse.

Although almost all (99%) of the men had had oral genital contact, only 78% had had seminal fluid in their mouth. Of this group, 26% usually spit out the semen. The 55 men who participated in a second round of questioning half a year after the main study reported frequent participation in anonymous sex (sex with partners who were not personally known to them). Fisting was practised at least once by 13% during the past year. Of the Copenhagen group, 40% had been treated for STDs during the past year, compared with 34% of the Aarhus group.

The average number of sex acts per week and the number of sex partners in the Copenhagen sample (Biggar et al. 1984) were similar to those in the sample studied by Bell and Weinberg (1978) in the San Francisco Bay area. It may be important in this respect that in both studies, the contact with the respondents was established with a gay organization as an intermediary. In the last decade, a greater acceptance of homosexuality has developed in the Western world; and Copenhagen, in particular since 1970, has developed into a major tourist centre for homosexual men.

Within the USA, minority group members are disproportionately represented among citizens infected with HIV. Blacks who compose 12% of the population, and Hispanics (7%) constitute 24% and 14% of the AIDS cases, respectively. Of all HIV-infected children, 78% are black or Hispanic, as are 71% of all women with AIDS. Seropositivity rates per 1000 among the 780,000 civilian applicants for military service who were tested between October 1985 and December 1986 were 0.8 for whites; 1.0 for Native Americans, Asians, and Pacific Islanders; 2.3 for Hispanics; and 4.1 for blacks. Similar comparative data emerge from testing of blood donors at Red Cross facilities.

IV drug use rather than homosexual activity appears to be the source of most HIV infection among minorities. Nearly half of the black and Hispanic persons with AIDS are heterosexual, compared to less than 15% of whites with AIDS (Hopkins 1987). There is a greater likelihood that a black IV drug user will contract HIV, regardless of sexual orientation, than will a white IV drug user (23 versus 13%, respectively). There is also a greater probability that blacks, compared to whites, will contract AIDS via heterosexual contact (4 versus 0.3%, respectively). In San Francisco, 75% of the inmates in jails are ethnic minorities and, although

most of these men may not consider themselves gay, forced or consensual sex is common in jail and prison settings. After release from jail, these men return to heterosexual activity (Evans 1988).

Among black adolescents, the rates for gonorrhoea, pelvic inflammatory disease, and syphilis are substantially higher than the rates are for their white counterparts. A survey of high school students in San Francisco found that, although overall awareness was low, condom use could reduce the risk of HIV transmission, black and Latin students were particularly ill-informed about the prophylactic effectiveness of condom use (DiClemente et al. 1988). Surveys of adolescents indicate that they have not changed sexual practices or methods of contraception in response to the AIDS epidemic (Strunin and Hingson 1987; Kegeles et al. 1988). Again, minority adolescents appear to be even less likely than their white counterparts to engage in safer sex practices such a condom use while having sexual intercourse (Kegeles et al. 1988).

A survey of adolescents found no relationship between knowledge of AIDS and behaviour change, but perception of susceptibility to HIV infection was strongly associated with a reduction in high-risk behaviours (DiClemente 1989). Unfortunately, compared to their white counterparts, minority adolescents perceived themselves as less susceptible to AIDS (Mays and Cochran 1988). In Fisher's (1988) study of potential factors affecting condom use among adolescents, perceived referent-group normative behaviour was the only factor that differentiated adolescents who use condoms from those who do not. Those who perceived their peers as supporting condom use were almost twice as likely to report condom use. DiClemente and Houston-Hamilton (in press) found that perceptions of referent-group norms as supporting unprotected sexual intercourse was more prominent among black adolescents.

Joseph et al. (1987) studied the magnitude and predictors of longitudinal behavioural change during 1984-85 in a sample of 1000 homosexual men from Chicago, 90% of whom returned completed questionnaires. Self-reports of sexual behaviour were obtained twice separated by six months. Although there was considerable variability in behaviour, mean changes were consistently in the desired direction. Avoidance of anonymous sex partners, monogamy, and modification of receptive anal sex to include condom use appeared to be especially important in this sample.

Using multiple regression analyses to determine the extent of relationship between various predictors and behavioural change, Joseph et al. (1987) expected to find two barriers to behaviour change: perceived difficulties with impulse control; and beliefs that biomedical technology would soon provide a prevention or cure for AIDS. In fact, a barrier to change was found only in the relationship between difficulties with impulse control and the modification of receptive anal sex. Beliefs in the efficacy of behaviour change in reducing AIDS risk was related only to the general self-report of the adoption of any behavioural change since the beginning of the AIDS epidemic.

Consistent with the findings reported regarding the importance of adolescents' perception of referent-group norms, the belief that one's peers were adopting recommended behavioural changes was positively and consistently related to a wide range of outcomes. These included the adoption of any behavioural changes, becoming monogamous, and reducing the number of partners or total exposures. Gay network participation was not related to any of the outcomes, and the authors suggest "that it is not participation itself, but the norms shared within a network, that may be the most important in influencing the adoption of behaviours consistent with risk reduction" (Joseph et al. 1987, p.86).

Guinan and Hardy (1987) have concluded that heterosexual anal intercourse plays little part in the sexual spread of HIV, and an editorial in the same issue of *The Journal of the American Medical Association* (1987) also took that position. However, Bolling and Voeller (1987) have argued that underestimation of the practice of heterosexual anal intercourse is dangerous given that receptive anal intercourse carries the greatest relative risk of HIV infection for homosexual men. About one-fourth of a sample of 526 women attending a gynaecological clinic in Texas who were interviewed reported occasionally engaging in anal intercourse, and about 8% did so regularly for pleasure (Bolling 1977). The 25% figure (for couples under 35 years of age) is precisely the same obtained in Hunt's (1974) questionnaire study of 2000 men and women. Reports of anal intercourse by women, however, are generally obtained only after repeated personal interviews, and the development of strong trust in the interviewer (Bolling 1976). Standard medical or

field interviews are unlikely to reveal such activity, leading to the perception that anal intercourse is rare. Therefore, as Bolling and Voeller (1987) point out, most data about HIV or other STDs among women may not reflect the role of anal intercourse or the degree to which this behaviour confounds calculations of the relative risk of vaginal intercourse.

Bolling and Voeller (1987) conclude that as HIV infection escalates among heterosexuals, anal sex should be carefully monitored in collaboration with very skilled nonjudgmental interviewers. Further, other epidemiological "hot spots" with high levels of AIDS (e.g., Brazil) may exist, particularly where anal intercourse is used for contraception or preservation of virginity. Bolling and Voeller (1987) assert that physicians, particularly those in obstetrics and gynaecology, and sex counsellors should set aside their discomfort in discussing anal sex, learn to draw out their patients, and counsel them about risks and prevention.

Research on Sexuality in Pattern I Countries

Societal attitudes toward sexuality interact with the kind of research that can be conducted and funded. In the English-speaking countries of the Pattern I group, the heterosexual reproductive bias is alive and well. Generally negative or hostile attitudes toward sexuality have impeded the funding of basic research on the development of sexual attitudes and behaviour and on the development of methodological tools.

The one area that has received considerable attention is that of unwanted adolescent pregnancy, but the research has been almost entirely applied in nature. It is ironic that in his successful program with Harlem (New York City) youth aimed at reducing teenage pregnancy by enhancing their opportunities for higher education and jobs, Carrera (1989) has relied entirely on funding from private sources and agencies. When asked his opinion of why funding was not available from the government, he said that he believed that it was because of the Harlem program's policy of providing contraceptive information and devices. Although these inner-city adolescents are advised against engaging in sexual intercourse at young ages by program personnel, they are also encouraged to inform counsellors if they are doing so, to visit the clinic for contraceptive devices, and so forth (Michael Carrera, personal communication, 3 May 1989).

An indication of the status of research on sexuality in North America is that *only last year* was the first book (Davis et al. 1988) published compiling a subset of the measures and scales that have been developed to study sexual attitudes and behaviour. Further, it is published, marketed, and distributed by its authors, rather than by an established publishing house.

Most of the scholars and researchers who have had any impact on the "acquired wisdom" of those who teach, conduct research, or do therapy relevant to sexuality have received their graduate school training from one of the more established disciplines (e.g., psychology, history, medicine, sociology, biology, etc). There are several programs that offer advanced postgraduate degrees in sexuality in North America, but their programs tend to emphasize particular vantage points (e.g., sex education or sex therapy) rather than providing the kind of well-rounded programs found in the more traditional fields.

For example, a student who receives a Ph.D. in psychology is expected to have demonstrated a mastery of the history of the field, major theories in the area, the methodologies used in studying psychological phenomena, and a particular specialization area. Educational programs in the area of sexuality in the USA can best be characterized as focusing only on the latter: knowledge of a particular specialization area. Although most disciplinary areas pay lip service to the importance of cross-disciplinary knowledge, there is probably no other aspect of human behaviour in which cross-disciplinary knowledge is more important than in our understanding of human sexuality. To have an adequate understanding of the behaviour of an individual, or groups of individuals, scholars who are concerned with human sexuality need to have at least rudimentary knowledge of how sexuality is affected by or related to prenatal differentiation processes, hormonal patterns, reproductive and sexual anatomy, cultural and sociological constructions of the meaning of sexual feelings and behaviours, psychological processes, and the like.

No existing program in the USA provides formal training in these diverse areas: scholars who attempt to master these diverse disciplinary approaches must actively seek postdoctoral training through structured programs and through intensive

reading of scholarly literature in fields in which they were not trained. Departments of sexology, however, do exist in several universities in Europe (Germany: Prague, Hamburg, and Frankfurt; Belgium: Leuven; the Netherlands), and in Canada (University of Quebec in Montreal).

In preparation for a "State of the Science of Sex Research" address (Allgeier 1984), I surveyed the contents of *The Journal of Sex Research* and *Archives of Sexual Behavior* for the four years from 1980 to 1983. The purpose of this review was to get an impression of the kinds of research being published by the two North American journals devoted to broad coverage of sexuality. During that period, 253 articles were published in the two journals, with over half of them (53%) using correlational approaches, and 13% using experimental approaches. Cross-cultural or cross-national studies represented only 4% of the studies; methodological studies (8%) and theoretical models (2%) were also rare.

A few of the correlational studies involved highly sophisticated designs and statistical analyses of the kind that some statisticians assert can permit causal or explanatory inferences, but the overwhelming majority of the correlational studies simply described the extent to which one or more variables were related to one another. From these and other journals, we do have a wealth of descriptive research on the relationships between various attitudes, the frequency with which various samples engage in various behaviours, and sometimes, the relationship between specific attitudes and self-reported behaviours. However, the samples used in these studies are generally unrepresentative of any larger population, or the extent to which they are representative is unknown. The research done by Zelnik, Kantner, and others (e.g., Zelnik and Kantner 1974, 1977; Zelnik and Kim 1982) of the Johns Hopkins team on the sexual and contraceptive behaviour and attitudes of national samples of American adolescents relatively representative of American adolescents is unusual in that it can be cautiously generalized to the group from which their samples were drawn.

In the context of some other topics, researchers have asserted that 50% of Americans are or will become sexually dysfunctional, or that a particular dysfunction or paraphilia is most common. However, I am unaware of any such studies in North America or elsewhere that have used nationally representative samples, so conclusions that are generalized beyond the samples that were studied are unwarranted.

In addressing the issue of why people do what we do, or the conditions under which we will or will not do or think various things, there are relatively few studies that are designed to permit such causal inferences. Part of the paucity of experimental or explanatory studies is due to the nature of the topic (broadly speaking, sexuality) and to societal and ethical constrictions on research. Researchers cannot manipulate gender, and experimental studies that might manipulate, for example, approaches to education about sexuality for children and young adolescents or experiences with various aspects of sexuality during these ages to examine their long-term effects are extremely rare. The paucity of experimental research with these two age groups is due partially to ethical constraints and partially to the problems that beset researchers who do attempt to design such studies and acquire approval from ethics review boards, as discussed in the context of the Goldmans' (1982) descriptive research (see also, Money 1976; Mosher 1988).

Sex researchers face another problem in their quest for greater understanding of sexual attitudes and behaviours. As noted earlier, particular questions may be ignored or studied with inadequate samples, methods, and measures, because of the inadequacy or unavailability of funding for research.

In my survey of the contents of the articles in *The Journal of Sex Research* and *Archives of Sexual Behavior* from 1980 to 1983, I checked the author notes to determine the percentage of studies that received some kind of financial support and examined the kinds (methods and topics) of studies that received support. Overall, 30% of the articles included footnotes expressing appreciation to various agencies and institutions for funding. Although this seems low to me, I have not examined the corresponding information for journals published in other fields such as biology or medicine. In the four years that I examined, there were only five articles that involved the development of a theoretical model and only 21 that essentially involved development of a methodological approach; over half of the articles in each category were funded (60 and 57%, respectively). In contrast, only 28% of the 134 correlational studies and 27% of the 33 experimental studies were funded.

Cross-disciplinary/Cross-cultural Interpretation

Among Bullough's (1983) examples of the problems of drawing conclusions from research in disciplines in which we are not trained was the assertion that cultures that encourage open sexual expression are less warlike and more loving than those that discourage open expression. I have read some of the research to which Bullough was referring, and have cited that conclusion in my published work. The correlations may stand up with further research, and I think that they will. The point that Bullough was making, however, was that the original cross-cultural data were collected by people who varied in their degree of scientific training and anthropological sophistication, ranging from scientists to missionaries, a fact of which those trained in anthropology and aware of its history would be aware.

Another important aspect of the problem of cross-cultural interpretation, of course, involves the definitions and meanings of particular behaviours. As noted in the discussion of the different definitions of "homosexual" in North America versus Mexico and Brazil, the meaning of the term varies enormously. Researchers are also potentially hampered by language barriers and the absence of intimate knowledge of the connotations of various terms and phrases in other languages.

Sampling. Because of the controversial nature of sex research, particularly in English-speaking countries, people differ systematically in their willingness to participate in research on sexuality. A study by Morokoff (1986) examined differences between female volunteers and nonvolunteers for one of the more invasive methods of sex research – psychophysiological measurement of sexual response. A sample of women were asked to complete questionnaires measuring their current sexual activities, level of sex guilt, sexual arousability, and repression-sensitization. She then gave them informed consent regarding a study of psychophysiological arousal and asked for volunteers for the research. Women who volunteered had greater noncoital sexual experience, more masturbatory experience, less sexual inhibition, and more experience with unusual sex than was characteristic of the women who declined to participate in the psychophysiological research.

Because of the reluctance of federal and state funding agencies to support sexuality-related studies, research that employs large representative samples is very rare. That problem, in combination with the generally sex-negative attitudes in the English-speaking Pattern I countries resulting in volunteer bias, makes sample bias quite likely.

Studies using less invasive measures such as pencil-paper questionnaires, interviews, and so forth are still potentially beset by the problem of volunteer bias. In the USA, researchers conducting studies in any institution that receives governmental funds (which is almost all of them) must provide potential participants with complete informed consent before they agree to participate.

Earlier I noted the inappropriate generalization of HIV infection risk-estimates derived by Masters et al. (1988) from data provided by 800 self-selected men and women who participated in their study. Their risk estimates were subsequently used by Nahmias (1989) in his formulation of a mathematical model to predict the number of people who would be infected by a single HIV-infected prostitute over a period of five years. Nahmias wrote: "Using data from Masters, Johnson, and Kolodny (1988), Kaplan (1988) estimates the probability of female to male transmission to be about 1 in 600 and male to female transmission to be about 1 in 400" (p.19-20). Nahmias, in turn used the "MJK" estimate, 1 in 400 or 0.002, in his model and concluded that about 20 men and 0.8 unborn children would be infected. Because the estimates of risk from unprotected intercourse attributed to Kaplan (1988) by Nahmias had been projected (erroneously) by Masters et al. (1988), in the first place, and because the original estimate was based on (a) unprotected intercourse, not (b) unprotected intercourse with an infected partner, I wondered about the veracity of the assumption that (a) and (b) would yield equivalent rates. I checked Kaplan (1988), and he wrote:

> In view of MJK's extreme claims regarding heterosexual transmission of AIDS, it is certainly worthwhile to consider their study carefully. In this paper, simple mathematical models are applied to the data presented. The results of this exercise indicate that the strong conclusions voiced by MJK *are not supported by their own data!* (emphasis in original, p.317).

Several other times in his paper, Kaplan takes pains to point out the problems of generalizing from Masters et al.'s data, and concludes,

> There are, of course, serious questions one could raise about this study (with the generalizability of such a distorted view of American heterosexual practices the primary concern). In particular, the reader should not believe (as the author does not believe) that the quantitative estimates of risk, infectivity, selectivity and reproductive rates produced in this paper are accurate measures or reflections of AIDS in the heterosexual community. Rather the measures employed are those that flow from the data presented in MJK. The sole purpose for producing these numbers was to argue that MJK's conclusions are contradicted by their own data, without regard to the quality of these data (p.322).

Nahmias' purpose was quite different: "The goal of this study is to determine the effect that a single-infected, very sexually active prostitute can have on a population of other uninfected adults" (p.15). Despite Kaplan's strong points about the inappropriateness of generalizing from "MJK's" data, Nahmias went on to set the risk of infection from a single act of intercourse with an infected prostitute as equivalent to the (erroneous) risk of infection from one act of unprotected intercourse (with infection status unspecified) claimed by Masters et al. on the basis of inappropriate generalization from their own data. There is not so much as a footnote acknowledging that Masters et al.'s conclusions cannot be generalized, nor should they be used to make predictions or projections about future events by others.

The point of this long discourse is that we need to attend carefully – particularly in areas that may influence public policy – to the bases of assertions and conclusions reached in research reports, both our own and others. Unfortunately, however, I expect to see future articles that assert that Nahmias (1989) has found that a single infected prostitute will infect 20 men and 0.8 fetuses within a five-year period, and I fear that policymaking bodies may pick this up and use it as justification that prostitutes should be restricted or punished more severely.

Identification of Research Needs

In this final section, I will focus broadly on a number of issues and tasks that badly need attention. Each of these require or would be greatly enhanced by the provision of government funds to support the recommended endeavours. It is a shameful commentary that it has taken the advent of AIDS to prompt many governments to increase their support for (applied) sex research. Even so, much of the money goes toward biomedical research: among its very large staff, the US Center for Disease Control has only a couple of social scientists trained to conduct behavioural research.

Training Programs

Funds are needed to develop broad-based programs to train graduate students in sexology. I have consistently avoided using the term "sexology" throughout this paper because of the absence of a well-defined discipline dealing with sexual behaviour in North America. Europe (where AIDS prevalence rates are lower than in the USA) appears to be further along in the development of such programs than is North America. In this regard, it might be very helpful to send a group of sex researchers to examine the curricula and facilities that exist in the Quebec and European programs. Although an accreditation program for sexuality programs has been developed by The Society for the Scientific Study of Sex (SSSS), thus far, none of the few existing programs has been accredited, and it is not clear that they could meet the broad-based criteria for accreditation developed by SSSS. To gain a fuller understanding of the variations in the meanings attached to sexuality and gender across cultures, considerable course work on this area should be part of graduate-level sexology programs.

Cross-national Research

Although there are a few exceptions, very little attention has been given to studies that address the same questions across societies. Such research should involve teams of scientists from the different relevant disciplinary areas and from the different nations that are being studied so as to avoid some of the problems of misinterpretation that can occur when "foreigners" attempt to make sense of the behaviours they observe.

When questionnaires or interviews are used, they need to be translated and back-translated to reduce the probability of the introduction of error due to the different linguistic connotations. Again, this requires a cross-national team of scientists and would involve considerable expense. Basic methodological research on potential cross-national differences in reactivity levels to different forms of

measurement needs to be conducted. For example, it would not surprise me if a sample of American men showed more inhibition when having their erections monitored by a penile plethysmograph than a sample of Swedish men matched with the Americans on age, educational level, religiosity, marital status, sexual orientation, and so forth. These and other potential differences need to be identified so that subsequent misinterpretations are avoided if, for instance, one were interested in conducting research to assess the effectiveness of programs aimed at eroticizing condom use.

Cross-national outcome studies are also needed to assess the extent to which differences in societies may interact with the relative effectiveness of different intervention strategies aimed at reducing the unwanted consequences of sexual activity. The previously-mentioned, broad-based approach used by Carrera (1989) to reduce unwanted pregnancies and STDs with black inner-city youth appears to be highly successful (I believe that he reported that the adolescent pregnancy rate among the girls in the program was about 2%). This program might not work with other groups in the USA, or among other societies holding relatively negative attitudes toward sex. Alternatively, it may be more extensive (and expensive) than would be needed in a society that held more positive attitudes toward sexuality.

Basic Research on Sexual Development

Across the Pattern I countries, we are badly in need of basic research on factors affecting the development of sexual attitudes, policies, and practices, working with samples of children and adolescents. Almost all research in this area has relied on retrospective reports of college students and adults. This approach is likely to yield a considerable degree of error because of problems with memory, reinterpretation of events, and social and political issues. An apt example of this problem may be seen with respect to studies of the development of sexual orientation. Because of the belief that discrimination against them may be greater if gays indicate a "preference" for same sex partners, rather than an "innate" inability to be aroused by other sex partners, in the current zeitgeist, it is common for gays to report that they have always been "different" from their heterosexual counterparts. That may, in fact, be true, although the phenomenon of "switching" (feeling highly aroused and becoming erotically involved with persons of the same sex at one point in their life, and subsequently having those same feelings and involvement toward persons of the other sex) casts some doubt on the "innate" explanation.

To understand the development of sexual orientation, "paraphilia and deviations" (I have put the phrase in quotation marks because, aside from coercive or exploitative activities, it is not clear that a sexual behaviour that is statistically atypical is also necessarily psychologically abnormal or damaging), aversion to some sexual acts and attraction to other acts, paedophilia, sexual dysfunctions, reproductive desires, tendencies to engage in behaviours that put one at risk of unwanted pregnancy, sexual coercion, STDs, and so forth, we need cross-national in-depth studies of children and young adolescents.

Sampling of Populations and Constructs

Studies that obtain a representative sample of the population to which the research team wishes to generalize are rare. Within and across nations, in-depth studies of sexual behaviour are needed. Obtaining and retaining such samples is an expensive and time-consuming process. When we (Laughlin and Allgeier 1979; Allgeier 1985) conducted research with the So of Uganda in 1969-70, we had two luxuries not normally accorded to contemporary sex researchers. Because we lived with this preliterate tribe for a year, we were able to begin by doing a census of the entire group and then generating a random sample of the population using a table of random numbers.

There is another kind of representation that is rarely mentioned outside of Social Judgment Theory circles (e.g., Hammond and Wascoe 1980). Representativeness in that context refers to obtaining a representative sample of events (constructs, beliefs, behaviours) that occur in particular environments. While conducting the census, I learned the language of the So (not previously recorded) and observed their behaviour. At that time, I was not constrained by ethics review boards in the questions that I could ask members of the sample, and my semi-structured interview schedule was developed after several months of relatively casual interaction and observation. I then interviewed all members of the sample about their gender roles and sexual attitudes and activities every two weeks, beginning with relatively innocuous (for

them) topics and, during the year, gradually moved toward more sensitive questions. Informed by each round of interviews, I developed the questions for the next round of interviews in an attempt to allow their world-view to shape my questions rather than laying my construct system on them. In this process, I was helped a great deal through discussions with a So man and woman (not members of the sample) with whom I would discuss the next set of interview questions before conducting the next round of interviews.

Such research is expensive, but as a prominent scholar (who shall remain unnamed) involved with AIDS research complained to me, in some of the early studies done on HIV transmission in Africa that concluded that homosexual contact was the major means of transmission, the American or European research team would fly in for a week with already constructed questions, ask whatever available people they could find about their sexual behaviour, and then fly off with conclusions that to some extent may have been predetermined by their own assumptions and constructs.

I am not arguing here that the kind of research that we had the opportunity to do with the So should be immediately instituted in all nations affected by AIDS. In time, we will find ways to prevent or cure AIDS or both. If history provides any lessons, however, it is likely that there will be other sexuality-related dilemmas that will emerge in the future in addition to the ones that currently confront us, and we will be in a much better position to grapple with those issues if we have a basic understanding of sexual behaviours and the construct (belief) systems surrounding those behaviours within and across nations and cultures via representative samples of populations and constructs.

Methodological and Measurement Issues

Because "sexology" has not yet emerged as a discipline with its own identity, reports of sex research appear in a huge number of different journals, depending on the disciplinary focus of authors, the specific topic, and other factors. Thus, locating information relevant to a particular topic is a huge task. Publication of a journal of abstracts was begun in the early 1980s that was (initially) a great help to those of us who wanted to remain abreast of the latest research in the diverse journals in which sex research is published, but issues of the journal, *Current Research Updates,* have not been received by subscribers for several years.

For researchers studying a particular topic, there may be already developed methodologies or measures with known psychometric properties (at least for the usually unrepresentative sample on which the instruments were tested), but if it is published in a disciplinary journal distinct from their own, they may be unaware of the methods/measures.

As noted, the Davis et al. (1988) compendium of measures is a good first step in gathering together some of the available measures and should encourage refinement of existing measures and creation of new ones for which no measure currently exist. At this time, however, many sex researchers have been in the process of (unknowingly) reinventing the wheel by creating a measure in their desire to study a particular topic. Thus, comparisons across samples are difficult to make when different measures are used with either unknown, or different, psychometric properties. The field badly needs to support good methodologists to develop basic instruments for the measurement of sexuality-related constructs.

Basic Versus Applied Research

Given the imperative need to attempt to increase the use of safer-sex practices in the face of AIDS, the current emphasis on applied research is understandable. However, if governments had been sponsoring basic research on sexual behaviour before the emergence of AIDS, we would probably have been in a much better position to cope with AIDS and to reduce the amount of suffering and the number of deaths from AIDS. It is imperative that in our search for a solution to this problem that we simultaneously recognize the need for solid, scientific, *basic* research on sexual behaviour so that we can reduce the devastating effects of future potentially harmful consequences of one of our most fundamental activities: sexual interaction.

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Table 1. Percentage of Adolescents Having Intercourse by Age by Country

AGE	USA	CANADA	ENGLAND AND WALES	SWEDEN	NETHERLANDS FEMALES/MALES		FRANCE FEMALES/MALES	
15	19	8					4	9
16	31	19	15	34				
17	44		30		31	20	28	53
18	58		50	79	43	39		
19	72	56			58	44	70	89

Note: This table was compiled from sources provided in Jones et al. (1986). The sources of data used in the comparisons were generally based on samples selected to represent the country from which the samples were selected. These include for the USA, Pratt and Hendershot (1984); for Canada, Jones et al. 1986, and Herold 1984; for England and Wales, Farrell 1978, and Dunnell 1979; for Sweden, Jones et al. 1986; for the Netherlands, Jones et al. 1986; and for France, Jones et al. 1986. Sources for the Jones et al. citations are from unpublished census or government survey data for the respective countries.

Research on Human Sexuality in Pattern II Countries

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Résumé en français. *La transmission hétérosexuelle est le mode de transmission du virus de l'immunodéficience humaine (VIH) le plus fréquent en Afrique subsaharienne et dans les Antilles (pays de tendance II selon la désignation de l'Organisation mondiale de la santé (OMS)); la connaissance des comportements sexuels entre les deux sexes est donc capitale pour le traitement et le contrôle de l'épidémie. Les connaissances acquises pourront ainsi contribuer à modifier les comportements sexuels et à limiter les comportements présentant des risques. Des données ethnographiques sur la sexualité servent de point de départ à une vue d'ensemble du cadre socio-culturel dans lequel il convient de discuter des liens entre la sexualité humaine entre sexes opposés et les risques d'infection par le VIH.*

Comme les valeurs culturelles déterminent l'orientation et l'expression sexuelles des individus en leur imposant des contraintes et en leur ouvrant des possibilités selon leur âge, leur sexe et leur situation sociale, il est possible d'aborder la discussion dans une optique plus vaste, témoignant du cycle de la vie et établissant une distinction entre les activités sexuelles axées sur le seul plaisir et celles visant la procréation. Dans le premier cas, les maladies se transmettent beaucoup plus rapidement que dans l'autre. Diverses conventions orientent le langage sexuel des personnes des deux sexes avant et pendant le mariage de même que celui des gens du troisième âge. La plupart de ces conventions imposent cependant des restrictions plus lourdes aux femmes qu'aux hommes.

L'abstinence sexuelle pendant la période de lactation post-partum demeure la méthode la plus efficace de contrôle de la sexualité conjugale. Selon 60% des références ethnographiques, cette période d'abstinence est d'un an ou plus. L'ethnocentrisme dans le choix d'un conjoint ou d'un partenaire sexuel contribue également à limiter le réseau sexuel d'un individu. Le concept des relations incestueuses exclut le mariage et les rapports sexuels entre une vaste proportion d'adultes. Au contraire, l'instabilité conjugale et l'adultère contribuent à inscrire les individus dans le réseau sexuel plus vaste de la population en général.

Avant le mariage, le folklore et la tradition orale contribuent à la formation des attitudes et des valeurs sexuelles. Les concepts de la beauté, de l'érotisme et des obligations en matière de reproduction sont transmis d'une génération à l'autre, par le biais des rites de la puberté et des fêtes associées à la fertilité.

Un certain nombre de facteurs érodent les moeurs sexuelles traditionnelles. L'éducation formelle, le déplacement des populations vers les villes et l'indépendance des adolescents vis-à-vis du contrôle de leurs parents et de la collectivité, ont pour résultat le libre choix des partenaires

sexuels, du conjoint et du moment du mariage, et l'adoption de modes de cohabitation non traditionnels. La présence dans les villes de jeunes hommes célibataires touchant un salaire encourage également les jeunes filles et les femmes attirées dans ces centres à offrir à ces hommes toute une gamme de services domestiques, commerciaux et sexuels, régulièrement ou à l'occasion.

Chez les femmes qui sont devenues grands-mères, parfois dès la fin de la trentaine, la sexualité, de procréatrice qu'elle était, relève plutôt du principe du plaisir. On attend des grands-mères qu'elles évitent de nouvelles grossesses pour pouvoir se consacrer à l'éducation de leurs petits-enfants. Certaines femmes trouvent économiquement rentable la fin précoce de leur période de fécondité, car elles peuvent alors s'adonner davantage à des activités commerciales. L'indépendance socio-économique à cette période de la vie encourage des aventures sexuelles entre personnes plus âgées et des partenaires de sexe opposé plus jeunes, ce qui laisse la porte ouverte à la transmission inter-générations des maladies transmissibles sexuellement (MTS) et de l'infection par le VIH.

La promiscuité sexuelle a des répercussions parmi les populations de l'Afrique subsaharienne et des Antilles. Dans les régions où l'infertilité est élevée, les cas d'infection par le VIH sont également plus nombreux, ce qui vient étayer l'hypothèse selon laquelle il y a un rapport entre des antécédents de MTS et l'infertilité et les risques d'infection par le VIH.

Les recherches doivent porter sur trois domaines. Le premier est l'étude systématique de l'écart entre les normes et les véritables comportements sexuels à différentes étapes de la vie; les méthodes employées par les individus pour éviter les restrictions culturelles ou autres limitant l'expression de leur sexualité, devraient également faire l'objet de telles recherches.

L'incertitude qui entoure la validité des résultats de la recherche sur la sexualité et le caractère limité des possibilités de design expérimental sont les deux principaux problèmes d'ordre méthodologique, particulièrement dans les sociétés non alphabétisées. Pour obtenir la coopération du public dans les recherches sur la sexualité, il est indispensable de replacer celles-ci dans un contexte altruiste et non stigmatisant. Malheureusement, les possibilités de présenter des recherches sur la sexualité portant sur le VIH/SIDA (syndrome d'immunodéficience acquise) autrement que dans le contexte primitif de l'auto-préservation sont limitées.

Le dernier domaine de recherche a trait à la meilleure façon d'établir des liens entre les activités et les résultats associés à la recherche sur la sexualité d'une part et les programmes de lutte contre le VIH/SIDA et les MTS d'autre part, tout en préservant l'équilibre entre les intérêts des individus et ceux de la société. L'élargissement des programmes d'hygiène maternelle et infantile et de planning familial pour englober les questions touchant la lutte contre le VIH/SIDA représente l'approche la plus prometteuse.

En conclusion, il faut procéder à une étude détaillée de la sexualité humaine dans les pays de tendance II avant de pouvoir répondre à certaines des questions les plus importantes sur la transmission et le contrôle du VIH au sein de la population hétérosexuelle.

Introduction

A number of features of the AIDS epidemic in sub-Saharan Africa and the Caribbean draw attention to the need for improved knowledge of the sexual behaviour of the general population. First, in contrast to other regions and populations of the world, bidirectional heterosexual transmission is the predominant mode by which HIV is being spread in what has come to be known as Pattern II countries (Mann et al. 1988; Carael and Piot 1989). The prevalence is about equal among men and women, whereas ratio of infected men to women in the United States is 19:1. Second, the levels of other STDs, which have been established as cofactors of HIV infection are high in areas with high rates of HIV infection (Retel-Laurentin 1974, 1978; Kreiss et al. 1988; Sala-Diakanda 1988). Third, given the poor prospects for a vaccine (Matthews and Bolognesi 1988) and/or an effective treatment (Yarchoan et al. 1988), the most feasible channel to control the epidemic lies in the modification of sexual behaviours that expose individuals to the risk of contracting STDs, including HIV.

Risk behaviours can be modified if individuals and groups are aware of the consequences of their sexual behaviour – i.e., they can trace an outcome to a particular behaviour; if they estimate that the impact of the outcome on their welfare is sufficiently grave to warrant foregoing the benefits of their current behaviour; and if they believe that their modified behaviour will eliminate the outcome. In effect, the study of sexual behaviour in Pattern II

countries should serve as a basis for establishing the determinants and correlates of risk behaviour in the context of HIV infection. Such studies can provide information about the details of sexual behaviour and knowledge of people about the consequences of their sexual behaviour. The information can then serve as a basis for developing interventions in health education and advice that are likely to produce the greatest benefit in terms of modified behaviour and lowered risk of infection.

In this paper I will first discuss the state of knowledge of sexual behaviour of these populations before awareness of the current epidemic. I will examine the main observations from ethnographic materials and social anthropological databases (Murdock 1967; Saucier 1972; Shoenmaeckers et al. 1981). Their relevance to heterosexual transmission of HIV/AIDS can reward research and assist personnel to respond in infection control programs. Next, I will discuss the research response to the HIV epidemic, the method being employed for data collection, and analysis. Some of the preliminary findings from a number of WHO-supported national studies illustrate the possibilities and problems facing systematic investigation of sexuality. They also point to the main areas that need further research.

Sexual Research Before the HIV/AIDS Epidemic

Human life can be divided into segments that approximate the cultural classification upon which sexuality and related reproductive controls and sanctions are based in Africa and the Caribbean islands. More relevant for the purposes of an understanding of sexuality in Africa and the Caribbean, however, is a classification based on the female life span, because control over female sexuality and the concomitant male competition for access to female partners are the ultimate bases of reproduction in heterosexual societies. The most important period in the social and sexual life of an African woman is between menarche and menopause during which most women form some regular union or marriage (Table 1). Sexuality within this span, which approximates the conventional terms adolescence and adulthood, is dominated by taboos regulating sexual intercourse. During lactation and menstruation, sexual intercourse is prohibited. The premarital period stretches from childhood to entry into the first regular union. This period is marked by the choice of partners. The third period is the postmenopausal period, approximating late adulthood and old age. Sexual activity may continue during this period if the partner remains in the residence, if society tolerates pregnancy and child bearing in older women who have become grandmothers, and if poverty in old age forces women to seek economic support by granting sexual favours to others.

Source of Materials and Methods

Given that detailed knowledge of sexual behaviour in the industrial countries of the West is comparatively recent, it is hardly surprising that no single study of sexual behaviour in Pattern II countries can compare with the work of Kinsey et al. (1948, 1953); Masters and Johnson (1966); Hite (1978). However, the sketches of human sexuality in traditional societies that emerge from early and some recent ethnographic and social anthropological studies have been pooled in data files. The human relations area file, for example, formed the basis of some excellent studies testing hypotheses about the distribution of the taboo on intercourse during lactation (Whiting 1964; Murdock 1967; Saucier 1972; Schoenmaeckers et al. 1981). Also, this file has been reviewed for contributions to cross-cultural knowledge of sexual behaviour. I have drawn from these studies and reviews because of their direct relevance to the issues raised by the heterosexual transmission of HIV infection. In addition, I have looked at the body of demographic information on such phenomena as marriage, infertility, contraception, and family planning, relying mainly on information from the World Fertility Survey (United Nations 1987).

The information in these files comes from a variety of sources and reflects the dispersed interests of the early European explorers, missionaries, ethnographers, physicians, and, more recently, local and foreign researchers.

Marital Sexuality: From Menarche to Menopause

Of 131 societies that have been identified in the literature about postpartum abstinence (Schoenmaeckers et al. 1981), 27 have been discussed in items (20%) dated earlier than 1940 and 33, or 25%, in items between 1940 and 1960 (by which date, across Africa, the byword was

independence). The remaining 71, 54%, date after 1960. Of the total, 22, 17% either had no restriction on lactational sexuality or enforced abstinence for fewer than 40 days; 37 items, or 28%, are for societies observing abstinence for between 40 days and 1 year. In effect, 79 societies, or 60%, observe abstinence for 1 year or more.

The implications of such figures for marital sexuality, and more directly for polygamy, are greater than was appreciated by most early investigators. For more than half the societies, the restriction on sexual access during lactation, at a total fertility rate of six, could enforce abstinence for more than a decade of marriage. Short (1976) estimated that the hunter-gatherer woman before the dawn of civilization spent about 15 years in lactational amenorrhea, and another 4 years pregnant (five times). In effect, 19 of the 35 years of the reproductive span would be spent under conditions for which present-day African societies would not encourage sexual activity.

Polygamous unions allow men to transfer their sexual demands to another wife when one is nursing an infant. Extramarital affairs by men are also tolerated and justified in societies with long lactational taboos. Affairs become stable unions if the new partner becomes pregnant or if the man chooses her to become a second or subsequent wife. Men can select women who range widely in ages.

The taboo on sexual intercourse during the menses derives from the association of menstrual bleeding with contamination (La Barre 1984). In societies that view blood as endowed with vital forces, its loss can be seen as a sign of impurity or at lease a sign of something amiss. As mustering, the spiritual forces needed for activities such as the practice of traditional medicine and hunting depend on keeping the spirits happy, contact with unclean elements compromises the professional integrity of the practitioner (Adeokun 1980). Consequently, hunters, medicine men, and others avoid sexual or any physical activities with a menstruating woman. Because of the sexual taboos during lactation and menstruation, more than half the reproductive span of many married African women is spent avoiding sexual contact with their spouse. In industrial societies, it is difficult to find any comparable reason for that much sexual avoidance within marriage. Sexual incompatibility and long separation are generally unacceptable in Western societies where the sexual and emotional content of marriage is described as greater than in African unions (Caldwell and Caldwell 1977).

Most traditional African communities have clear definitions of incestuous relationships and other forms of forbidden sexual partners. A large number of consanguineous relationships are ruled out of marriage or sexual contact. Although the definition of such relationships varies among ethnic groups, the scope is usually wide enough to rule out marriage between most adults living in the same community. Part of the function of arranged marriages is to protect the couple from transgressing the incest taboo. The general belief is that the breach of such taboos carries mental and reproductive health risks. Some of these beliefs form the basis of the response of African women to the management of infertility problems. Faced with such problems, they consult traditional healers partly to investigate the cause of infertility and partly to fulfil the expectation of the society that most problems of infertility originate from the woman.

In a recent study of the Mehinaku Indians of the Amazon in Central Brazil, similar taboos and other principles of sexual avoidance placed a restriction on the extent of promiscuity. Gregor (1985, p.35) estimates that the incest taboo and in-law avoidance account for as much as 50% of the prohibited pairings in the decidedly small community in which only 340 extramarital (heterosexual) partnerships theoretically were possible.

Discord arising from arranged marriages, or other sources of conflict, encourages some married individuals to have extramarital affairs. Also, occasionally, women observe the lactational abstinence in their marriage while breaking the taboo in extramarital affairs. The ambivalence of women to a breach of the taboo is revealed when, in response to the illness of their nursing infant, some confess to such affairs in the belief that the illness was caused by their affair. In other instances, the circumstances leading to adultery are the lack of care from the spouse and the inability of the husband to provide an expected level of support (Roberts and Tanner 1959). For such women, an extramarital relationship is often begun with men who can make up for the economic and emotional deficit within marriage. As expected, the greater anonymity of urban places allows such liaisons to flourish. Affairs are not unknown in rural areas, but the smallness of communities often results in discovery and the eventual transformation of the

adulterous association, through divorce from the first husband, to a marriage to the lover.

More distressing is an adulterous relationship forced on some women by the general belief that women are responsible for any infertility or lower than expected fertility within marriage. Delay in having a child is considered cause for concern, especially in societies where there are low levels of infertility. The presumption that infertility is traceable to the woman in a partnership results in pressure to prove fertility. Adulterous relationships with lovers or, reluctantly, with charlatans offering guarantees of a cure, may lead to pregnancy. If the adultery is undiscovered, it may have no adverse effects on the marriage. The paternity may not be questioned, and the woman herself may be uncertain whether her husband or the other man is the father.

Another device for the control of sexuality within marriage is seclusion soon after marriage. In some societies, the freedom of the adolescent years gives way to some discipline within marriage. For example the Buhaya of Tanganyika (now Tanzania) observe a period of seclusion for the bride before first birth to control sexual access to her person (Moler 1958). This arrangement reduces the chances of sperm competition and increases the degree of certainty of paternity. The group is otherwise tolerant of teenage sexuality. In effect, the device is a way of compensating for the proclivity of women in such societies to carry flirtatious behaviour into marriage. To reinforce the different ethos expected within marriage, the seclusion serves as an orientation for the teenager toward the responsibilities of marriage and motherhood.

In the forming of both marital unions and adulterous relationships, ethnocentricism often limits the choice of partners. The strong role of ethnic identity in the forming of social and economic relationships may well account for the persistence of pockets of sociodemographic traits that do not appear in neighbouring groups, the distribution of infertility in the Central African region being an example (Sala-Diakanda 1988).

All these devices complement each other in setting limits to the sexuality of women in particular. In largely male-dominated communities, a double standard exists in matters of sexual behaviour. The total effect of the regulatory mechanisms is to make it difficult for women to express their sexuality outside the framework of child bearing and rearing, once they are married. The often mentioned justification for such imposition on women is that any other alternative will lead to indiscipline in the home and to a decline in the moral standards of children and of society in general. In a sense, this orderliness of marital sexual habits exists side by side with other sexual mores relating to premarital sexuality or to the modern sexual ethos created by modernization and urbanization.

Sexuality Before Marriage

The period between childhood and marriage tends to be short both in sub-Saharan Africa and in the Caribbean islands. However, it is a period during which the bases of subsequent sexuality are established by a number of devices. The devices are critical in the dynamics of the transmission of STDs and HIV in these populations. Before the secondary sexual organs develop, young adolescents learn about sex in some African societies from folk stories that broadly outline beauty, erotism, and reproduction.

Folklore as Sources of Sex Education in Childhood. I can well remember rural African children being introduced to concepts of sexuality by elderly persons, mostly men, in a family telling stories in the moonlight. The stories covered a wide variety of animal and human sexual exploits. The main features were probably universal, but a number are relevant because of the messages they pass on to the young audience about sexuality and the social attitude to such exploits. First, as in most fables, key players in such stories include humans and animals cast in human roles. The tortoise is a favourite, often endowed with unusual intelligence and cunning. Second, the storyteller could modify the details about sexual activity to suit the audience. The opportunity to respond to questions or to end stories with a moral message meant that the storyteller had a major role in the formation of moral and normative sexual values in the young audience.

Third, coming at the end of the day when all household chores were done, suppers eaten, and stars out, these stories were, in effect, bedtime stories. Some of the children fell asleep at the story sessions as the night progressed or in response to the lulling effect of singing choruses. But a side-effect of the moonlight session was the opportunity it provided for childhood sexual experimentation.

Some of the older children occasionally extended the moonlight entertaining, all by themselves, when the very young and the adults had retired in anticipation of the next day's chores. Some opportunity existed in the traditionally sprawling housing for the children to try out, on their own, the sexual exploits they heard in such stories.

Whether the adults observed these early experimentations or not, the age limit imposed on the composition of play groups ensured that the pubertal male and female were not likely to be within the groups. In effect, at the onset of signs of puberty, the individual stopped being a child and moved into the adult routine of the household. Play groups were, therefore, not likely to have produced unintended pregnancies. In some cases, parents arranged marriages while children were still in infancy. Consequently, marriage could take place soon after the age of puberty. This way, illegitimacy was substantially reduced if not eliminated. Arranged marriages ensured that the engaged persons were not related and that the family into which each partner was marrying did not have any undesirable traits such as histories of mental problems or other hereditary defects.

The mythical tortoise was no more than a human hero in animal shell. In the classic cases, the tortoise was a superman, winning where lesser men failed. In any case, sexual exploits were heterosexual. Courtship was conceived as a stratagem for overcoming the reluctance of women. Rape was, by implication, the solution of the stupid. The sexual encounter could be anywhere subject to the ingenuity of the tortoise. Sex was vaginal. Virginity was sought because it meant the primacy of the first partner. Position for sexual intercourse could be ventral or dorsal. There were no hints of anal, oral, or bisexual exploits in those of the stories that I remember. Another clear message was that there were no adverse outcomes. There was hardly any allusion to STDs.

Some adolescents' first sexual experience may date to these early experimental encounters, but marital sexuality begins with initiation ceremonies that differ from one ethnic group to another and carry implications for the future reproductive and sexual health of the participants.

Puberty and Initiation Rites. The various forms of initiation ceremonies in traditional African societies provide some insights into the formalization of notions of beauty, sexuality (Caplan 1976), reproductive responsibilities and civic obligations tied to sexuality. In some groups, to this day, girls are placed in isolation for purposes of enhancing their attractiveness. Virginity is clearly implied in the "outing ceremonies," such as in the form of adornment worn on such occasions. Even in societies that are liberal in matters of premarital sex, the initiation still serves a useful purpose in reorienting the bride to marital duties. And in the case of the Bahaya (Moler 1958) and the Bukoba (Rwiza 1958) also of Tanganyika, those responsibilities include the provision of certainty in the paternity of the first birth by restricting sexual access to the young bride. Most often, female children are the ones who are involved in initiation ceremonies since they are the ones having the wider range of roles to play in adult life as wives, mothers, sex partners and housekeepers. But, in some populations, male children are also withdrawn from the general population for special training in their civic obligations. The overtly sexual indoctrination of both sexes in these ceremonies requires additional study since the evidence is not as widespread as the mere citing of the presence or absence of an initiation.

Circumcision and Sexuality. It is difficult to separate the practice of circumcision among most African groups from the discussion of sexuality. While the removal of the foreskin in males is seen by some groups as enhancing personal hygiene, some groups see the whole exercise as an endurance test and a mark of transition from childhood into adulthood. The excision of the clitoris in females at any age, however, cannot be easily explained in terms of personal hygiene. One explanation offered for the practice in Yorubaland is that a woman with the clitoris intact cannot have a live birth. Although some African ethnic nations practice circumcision in infancy, often within the first 40 days of birth, some groups restrict this to the pubertal initiation. Because of differences in personal hygiene, uncircumcised men and their partners may be at increased risk of STDs. However, the traditional operations – both circumcision and clitorectomy – could increase risk in the present circumstances, exposing children to nonsexual transmission of HIV infection if the methods adopted expose them to the blood of infected individuals. The reported practice of having older men perform clitorectomy on the

young girls may expose such girls to STDs (Short, R.V. personal communications 1989).

Fertility, Festivals and Sex Education. Another periodic venue for sex education is the annual festivals relating to farming and harvest cycles. The cycles are associated with fertility symbols, and in most tribal communities, propriety is temporarily suspended at these festivals. Women take part in burlesques in which they exaggerate their sexuality. The elderly share overtly sexual jokes with the very young. These opportunities free Africans from the guilt surrounding sexuality in Western civilization (Freud 1920). It may also account for the relatively "open" or "healthy" attitudes of Africans to sexuality. The overtly sexual festivals in Latin America and the Caribbean may be serving the same purpose.

Formal Education, Urbanization and Teenage Sexuality. Before the introduction of formal education and the upsurge in the education of girls, no large clusters of premarital teenage populations were located outside the family. Consequently, the sexual mores of teenage girls bore a close relationship to the traditional mores of the society into which they were born. Now, children are being exposed to sexual mores that are different from the traditional ones. Post primary education results in the pooling of teenage populations into boarding institutions at an age when their interest in sexual matters is on the increase. The convenient location of such institutions close to urban centres and to similar institutions for boys means that female institutions can be targeted by sexual adventurers from the wider society. In this context, the sexuality of teenage populations, outside straightforward prostitution, becomes an integral part of the dynamics for the transmission of HIV. It has been shown that the combination of interest in sex, opportunity offered by being away from parents, and the temptation to earn something on the side, to provide for tastes cultivated from the mass media, leads to a fair amount of sexual activity within the teenage years (Akuffo 1987).

Operating through educational systems and by direct access to the public, religious organizations, both Christian and Islamic, have been able to influence sexual mores by selectively approving and disapproving of the sexual and reproductive life of believers (Hokororo 1960).

First Intercourse

Brody (1981) investigated the timing of first intercourse, the role of rape, and the age differences between pairs involved in such sexual activity in Jamaica. Citing an earlier study of 150 female respondents carried out in 1961 (Blake), he observed that menarche was at age 12-15 with a median of 14 years. The youngest age at first intercourse was nine, and the oldest was 25. Most women were between ages 14 and 19, with a median of 17 years. In another study 20 years later, mean age of first intercourse was 15.3 years for 133 women who had been pregnant at some time. The circumstances of the first intercourse varied and were influenced by factors such as curiosity (38%), after menstruation, wanting to have the experience, chance, love and liking the boys, and in some instances, rape. In only one instance of the 133 cases was the partner younger than the girl. The partners were the same age in another 16 cases, and the remaining 114 cases involved partners between one and 20 years older than the young women. The probable rapes involved much older partners.

The respondents had benefited from very little in the way of sex education, folk or formal, and their parents had depended on strict discipline that was inconsistent with their own sexual or family life style. The upbringing of boys was marked by greater freedom. The young men had earlier experience of intercourse, and two-thirds had engaged in coitus by the age of 13. They were initiated by much older women. Chance encounters or "while playing" predominated as explanations by male respondents (Brody 1981, p.140). Prior to first intercourse not much self exploration had taken place, implying a low level of masturbation.

How much the Jamaican situation differs from the African situation is not clear in the absence of comparable studies. Although efforts have been made to relate the patterns of sexual behaviour in the Caribbean to the African ancestry of Caribbeans, some major differences arose from the experience of slavery. The experience probably produced a homogenization of the Caribbean African heritage that contrasts with the diverse ethnic origins of the slaves. Caribbean family life owes more to the circumstances of the slave economy than to African values. Consequently, major elements of child rearing in sub-Saharan Africa differ from practices in the Caribbean (Tables 2-6). What reality lies

behind the differences has yet to be analyzed, but the information indicates how the Caribbean society has modified African family values.

The patterns in the two regions are somewhat alike, although people marry earlier in Africa than in the Caribbean. Of women aged 20-24 in Africa, about two-thirds had married by age 20, half of Caribbean women had married by the same age. Similarly, half of African women had given birth by age 20, but the figure for the Caribbean is just higher than a third. Marriages are highly unstable in both regions, and contrary to anthropological generalizations, significant proportions of women in both regions do not remarry (Table 3). In spite of the early age at which many marry in both regions, significant proportions who are 20-24 years old are still single in Caribbean countries other than Jamaica (Table 4).

Sexuality in Old Age

Sexuality in old age has received scant attention in Pattern II countries because of the predominantly young populations. Another reason is the apparent decline of interest in sex, within or outside marriage, as African women age chronologically or socially. The parameters of sexual interest of menopausal women and elderly men may be relevant to the dynamics of the spread of STDs.

In the context of early marriage, African women become grandmothers generally earlier than women in societies with late marriage. Although no hard data have been collected on the sexuality of women in the last stages of the reproductive span and declining fecundity masks the extent of sexual activity, the intolerance of some communities to pregnancy in the grandmother has been documented (Caldwell and Caldwell 1977). In the absence of access to effective contraceptives, abstinence remains the most feasible option for women to avoid pregnancies. For groups that have no reservations about grandmothers' becoming pregnant or for whom abstinence is unacceptable, reliance is on traditional contraception (Adeokun 1980, 1982).

However, a number of trends depart from the norm. Some women become grandmothers in their late 30s and early 40s. Their duty to procreate is considered as fulfilled, and they enjoy greater freedom of choice in matters like travel, trade, and even residence. The combination of such opportunities and the exposure to sexual mores of other nontraditional sets in society can lead women to explore sexuality outside marriage. The greater mobility and economic independence enable some women to attract much younger men as lovers. Young men are often available because they have not yet accumulated the economic resources to obtain the standard of living made possible by the wealth and attention of the older woman. This is the genesis of the "sugar mummy," elderly women engaging in romantic liaisons with young men on whom they shower attention and resources in exchange for sexual favours. Although, at times, widows have used their inheritance to attract younger men and although some men prefer older women as sexual partners, in practice the broad principle of respect for elders makes it difficult for young men to make sexual advances to older women. The sugar mummy and her lover normally live with unfavourable reactions from their respective age groups, so are commoner in urban areas where anonymity and independence of people from community control are greater than in rural areas.

The sexuality of elderly men is far easier to sketch, given the double standard that operates in favour of male sexuality. In contrast to the circumspection with which independent women treat their affairs with young men, elderly men employ open devices. They marry young women as they proceed in polygynous unions, they control economic resources over a longer stretch of their life span and are, therefore, able to indulge their fancies. The power and resources held by elderly men enable them to entice young women in the well known role of "sugar daddy." They offer luxuries of life, using their powerful positions in society to gain access to the sexual favours of a vulnerable segment of society, namely, teenage girls in educational institutions living away from parental control and at a very impressionable age. This phenomenon must contribute significantly to the spread of STDs into institutions.

Also, a minority of men in African urban areas are copying life styles that they observe in industrial societies. Homosexuality between some rich old men and poor young boys and the use of drugs are such imitative behaviours that play a part in the dynamics of the AIDS epidemic. The most travelled individuals that practice such behaviours transfer infection abroad and at home, and often engage in heterosexual contacts as well.

Impact of Urbanization on Sexual Orientation

The drift of young people to towns in search of post-primary education and jobs has altered mating principles. Arranged marriages are now less frequent, and marriages are often postponed as young people of both sexes try to learn a trade or complete some minimum level of education with which they can enter public-sector employment. These changes are reflected in the age at marriage and the proportion of young people in urban areas who are single. In addition, more men than women move into towns, particularly mining towns and plantations where there are virtually no jobs for women in the formal sector. The relative scarcity of sexual partners creates a demand for paid sexual services, and various categories of sex work have emerged in urban centres. Anonymity is assured in urban areas. Parental control and societal strictures are less effective than in rural communities. The implication is that the higher the rate of urbanization or of the commercialization of farming, the faster will be the change in sexual norms. The sexual behaviour of the population in urban areas may represent a marked departure from that of the rural population, and the differences may account for the current rural/urban differentials in HIV infection.

Changes in child rearing and sexual behaviour were introduced from Western education and from the Islamic canon, shortening abstinence periods in some societies. In effect, strict observance of abstinence gave way to adoption of the Islamic canon of 40 days or the convenience of withdrawal as a compromise to total abstinence.

Teenage Pregnancies, Abortion and Infertility. Urbanization has contributed to a major increase in teenage pregnancies (Akuffo 1987). The reduced level of control that parents can exert on their children once they move into cities encourages the adoption of new attitudes to sexuality. As migration from rural communities to towns is triggered by, and results in, acquisition of formal education, the hold of traditional taboos on the individual is weakened. The weakening is caused by the recognition of alternative explanations for consequences predicted by taboos. It is also caused by exposure to people with demonstrably different life styles in towns who suffer none of the predicted outcomes of breach of taboos. The weakening is, however, not sufficient to remove doubts in the minds of people as they try to combine the traditional and the conflicting views. The result is an ambivalence in behaviour that has to be taken into serious account in the interpretation of stated beliefs and practices.

Also, urbanization is implicated in the increase in infertility. The local view is that the urban environment allows a freedom in behaviour increasing unplanned pregnancies and abortions that leave young women infertile. This crude explanation of the aetiology of infertility is at times based on some misconceptions about human reproductive biology and on the methods of surgical contraceptives such as hysterectomy and its variants. To the lay analyst, the "removal of the womb," the "tying of the womb," and local phrases to those effects are not based on precise knowledge but a translation of native views of the reproductive system. Although this lay explanation is only half true, it is valid to examine the extent to which infertility and STDs can be employed as markers of sexuality and of the potential for HIV transmission in heterosexual populations.

Markers for Sexuality

The variation in levels of infertility across Africa attracted demographic interest before the advent of HIV. The interest grew partly from the awareness that Africans are predominantly pronatalist and that fecundity is held at a premium. The interest also reflected an awareness that the level of infertility would have to be reduced and the chances of survival of children as two preconditions for the general adoption of contraception.

Infertility, measured as rates of childlessness among married women at the end of child bearing (Table 5), is high in central Africa; low in Burundi, Kenya, and the coastal areas in West Africa (Table 6). Early attempts at explaining the origin of infertility focused on prostitution, divorce or on cultural practices that increase the likelihood of transmission of STDs or secondary infertility.

The World Health Organization sponsored research in 33 centres, involving 8500 couples, and found:

- Of those consulting for infertility, African women are younger and the men are on average older than those from the developed countries;

- The level of primary infertility is twice as high in developed countries than in Africa; and
- Women reporting a history of STDs or of postpartum or postabortum complications were 9% and 8% respectively in sub-Saharan Africa, that is, thrice the rate in the developed countries (Farley 1986).

The diagnoses suggested that infertility was attributable to female factors in 44% of the cases in sub-Saharan Africa compared with 35% in developed countries. Bilateral tubal occlusion accounted for 49% of the sub-Saharan African sample and only 11% in developed countries. Of the total cases of infertility, no female cause could be demonstrated for 16% in sub-Saharan Africa and 40% in developed countries. Although the traditional presumption of female factors may have led to incomplete investigations among male partners in Africa, the results still show that acquired conditions play a major role in female infertility in Africa. The men reporting a history of STDs was 46% in sub-Saharan Africa – 10 times the percentage in developed countries. Evidence from the World Fertility Survey has reinforced the findings. By allowing a distinction to be made between primary and secondary infertility, the information (Farley 1986, p.13; Farley and Belsey 1988) indicates that rates of secondary infertility are up to four times higher in Cameroon than in most developed countries.

Although the information on infertility suggests levels of STDs, the relationship is not direct. Levels of primary and secondary infertility reflect the effects of factors such as health care services, use of contraceptives, changes in family size, and the difficulties of obtaining accurate information. However, the increased risk of HIV infection in patients with other STDs is reason enough to call attention to the relationship.

To the End of the 1980s

In effect, at the middle of the 1980s when it was becoming apparent that the HIV/AIDS epidemic was not limited to homosexuals nor to developed countries, the knowledge of sexual behaviour was circumscribed by the early scholars' views of African culture and was restricted to the practices they felt worth recording. Few aspects of sexuality in any society had been systematically studied, and attempts at testing hypotheses focused on the distribution of taboos (Saucier 1972), the distribution of family structures as they were likely to influence resource sharing and the bonding within the family (Oppong 1970).

The HIV/AIDS epidemic is not the first STD epidemic in the world (Institute of Medicine and National Academy of Sciences 1988). Like AIDS, syphilis initially was characterized by high fatality and the absence of a cure. Similarly, control measures included faithful sexual relations, safe sex, and control of prostitution. Similarly, the HIV infection is carried for life, and infectivity is possible during both asymptomatic and symptomatic phases. The epidemic is spreading much faster than did any other STD, and the repertoire of sexual behaviour involved – homosexual, bisexual, heterosexual, anal – is greater than has ever been encountered in earlier epidemics. HIV has been isolated from saliva but debate continues over the efficacy of oral sex as a mode of transmission. The chain has linked both sexes and nearly all ages from the fetus to the elderly.

The recognition of the modes of transmission is a major step in the effort to delimit the networks for transmission. Understanding the patterns of sexual behaviour and modifying them are the challenges for research, with the work by the WHO Global Programme on AIDS being particularly notable.

Research Response to HIV/AIDS Epidemic

The program of research on sexual behaviour in response to the HIV/AIDS epidemic has been influenced by intellectual and political considerations. The lack of coherence initially delayed the identification of the various types of HIV. Then, stigmatization was associated with efforts to identify the possible origins of the virus. Third was a reluctance on the part of most countries to expose themselves to uncontrolled access for the dubious honour of contributing to the statistics on the prevalence of the syndrome. And finally, some countries felt helpless because the technology for diagnosis of infection and associated research was not within their grasp. The outcome has been the emergence of a highly centralized procedure for the approval of research and other HIV/AIDS-related activities within countries.

That the program of research has been reshaped to get beyond the politics is a tribute to the integrity and stature of WHO. The responsibility for initiating a research agenda fell to WHO, and specifically its Special (later Global) Programme on AIDS. National AIDS committees were struck in all member nations and were given final say about the proposals approved or funded for their countries. What effect these steps have had on the quality of research that gets done is as yet unclear but the procedure eliminates researchers or proposals that do not conform with national images and expectations.

One major effort in Pattern II countries has been initiated by the social and behavioural research unit of WHO's GPA. The study design and the instruments were meant to be prototypes, applying evidence from epidemiological studies that show the choice and number of sexual partners, use of condoms, the presence of other STDs, and the type of sexual intercourse play a role in heterosexual transmission.

The instruments developed by WHO could be used for surveys of general population or specific risk groups. Most countries in Africa have opted for surveys of the general population, acknowledging that local researchers will face enough difficulties in dealing with the socially sensitive subject without having to seek out specific groups like prostitutes.

In the absence of truly national surveys of the prevalence of HIV infection, one cannot work out probability of infection with any certainty, but available evidence suggests that urban rates are higher than rural rates. Fortunately, most participating countries have national sampling frames employed in, for example, censuses and the frameworks could be the basis for reliable sampling. Technical support has been made available to researchers in the application of the study design. A look at the questionnaire and the results of the pretest is worthwhile.

The questionnaire on the study of partner relations (as the investigation of sexual behaviour came to be termed) focused on the aspects of sexuality that were demonstrably relevant to the transmission of HIV. The first section covered sociodemographic variables, with information being sought from anyone older than 10-15 years, the age limit depending on local perceptions about the start of sexual activity and the readiness of young sexually active persons to talk to, or be allowed to talk to, interviewers. The sex, education, employment, mobility, and religion of the respondent, as well as features of the community (urban or rural) in which he or she lived, have been included.

The second section covered the knowledge of AIDS and the source of information. The third is devoted to marital history and parenthood. The formation of stable or sexual partnerships is also included in this section. Stable unions are described as those lasting up to a year, irrespective of the frequency of the sexual contacts. This categorization was in concession to the variety of legal, traditional, and mutual-consent unions to be found in Africa and the Caribbean and with which there is little or no social stigma attached.

A section is devoted to the pattern of heterosexual behaviour within the previous year and within the previous 4 weeks. The longer period obviates seasonal variation and the possible omission of infrequent high-risk behaviour. More detailed information is collected for the shorter period over which memory lapse is likely to be minimal. Number of partners, frequency of intercourse, types of sexual activity, and the marital status of partners are some of the details. The circumstances surrounding the first sexual experience are included in this section.

A section is devoted to contraceptive knowledge and to use of condoms. The regularity of condom use is studied within the context of contacts with commercial sex and with regular partners. A number of questions probe attitudes of respondents to condoms and their use.

Previous experience of STDs and knowledge of the prevention practices form another section. Sexual ideology, referring to the beliefs and attitudes about sexuality and sexual behaviour, has also been included.

A number of questions about knowledge, attitudes, and beliefs relate to HIV and AIDS in another section to provide a link between knowledge and behaviour. This section asks about the modes of transmission and the likelihood of becoming infected. The beliefs about prevention of HIV infection through behaviour modification and the nature of changes respondents have made, or are planning to make, are also investigated in this section.

In addition, a number of optional modules are included on such topics as injection practices, sexual practices such as anal intercourse, drug use, and homosexuality. These were designated optional

in the belief that such topics were not of general regional concern but could be pertinent in some countries. Investigators were encouraged to include such sections if there were reason to believe that the information would be useful. In retrospect, the emphasis on heterosexual transmission in Africa and the Caribbean hindered the exploration of other modes. For example, in some areas, the preferred treatment for STDs is injection and, often administered by unregistered injectors, may have contributed markedly to disease spread. (WHO/GPA 1989a).

Although very few researchers had much experience in the investigation of sexual behaviour as such, the field experience of those involved in the pilot testing of the instrument and in the eventual conduct of national studies is not in doubt. In addition, background documents are available reinforcing the main interviewer training and analytical considerations in interpreting the materials generated by the instrument (WHO/GPA 1989b).

Although a large number of African countries are currently involved in surveys of partner relations or KABP or both, no final report has yet been published.

Observations from Uganda

A report on the pilot test in Uganda (Ankrah and Ouma 1989) and another report of a non-WHO survey carried out in Uganda (Anderson et al. 1988) are now available. The two studies offer insights into the potential strengths and weaknesses of the series of behavioural studies initiated in response to the AIDS epidemic.

In Uganda, the pilot study concentrated on evaluating the two WHO survey instruments, the KABP and the partner relations questionnaires. Four survey locations were selected on the basis of epidemiological information reflecting areas of high, medium, and low prevalence of HIV. Kampala was selected as a special area (Ankrah and Ouma 1989). Sixty households were selected from each of the three districts and 120 households from Kampala. Sample selection benefited from an earlier demographic and health survey (DHS) and from technical advice from WHO and from local statisticians.

In all four study sites, senior investigators decided which questionnaire to complete for each household. In some, they combined the KABP questionnaire with the partner relations questionnaire, whereas in others, interviewers completed only the partner relations questionnaire. Apparently, people found that the average of 2 hours spent discussing such a serious topic was more acceptable than the half hour needed for the single questionnaire. Also, the combined questionnaire placed the discussion of sexual behaviour and KABP in a relevant and comprehensive context, a feature not found in discussion of one aspect without the other. The investigators concluded that the joint instrument made more sense to the respondent. Readiness to talk about AIDS was a trait I observed when I visited the country not too long after the pretest. Talking, in a sense, allowed the respondents to express their anxieties and hopes.

Some interviewers found a few sexual concepts difficult to handle in the local language. Anal intercourse was one such. The association of the interviewers and the survey with the ministry of health and WHO activities was found to have been a factor encouraging cooperation from the public. Contrary to early concerns, young people were allowed to take part in the survey in households in which they were dependents and those aged 15-19 years had clear views about their sexuality and the epidemic.

Of the 127 people who were interviewed according to the combined questionnaire and the 60 who had the partner relations schedule only, 79 were men and 108 women. Most were married (71%) or reported regular partners (16%), which for most, is a stage toward marriage. Those reporting regular partners were younger than those in marriages. Any presumption of single-partner relationship on the basis of the marital status of the respondents was based on the claimed religion, mostly Christians (82%). Information on the number of partners in the last 12 months reveals that 59% had only one partner. This is about the same proportion reporting adherence to the AIDS control slogan of loving carefully and "zero grazing." Others reported two partners and some three. Only 4% of all respondents had more than three partners. The number increased with the age of the respondents.

Prior to marriage or the formation of regular unions, women reported higher numbers of sexual partners than did men. This, in the view of the investigators, conformed to the submissive position

of women in the society. Once married, women have fewer sexual partners than the men.

The practice of avoiding intercourse during breast feeding varied among ethnic groups but generally averaged 12 months. Also, only a minority (5%) of respondents reported continuing sexual intercourse during the menses.

Most of the total respondents viewed the epidemic as serious. About one in ten (11%) reported episodes of STD symptoms, most having had repeated episodes of infection. The frequency of sexual intercourse within the last 4 weeks did not differ significantly among the age groups. Just over a third (35%) reported no intercourse, 19% had engaged in intercourse 1-3 times, 22% reported 4-10 times, and the rest (25%) more than 10 times. Frequencies were higher in rural than in urban areas. Little commercial sex was reported and usually by the youngest group. Condom use is limited.

Of the 127 who answered the long questionnaire, 67 reported first intercourse between the ages of 15 and 19. A small number of female respondents reported being introduced to sexuality in rape by older, and presumably, more sexually experienced men. Sexual activity started much earlier in rural areas than in urban areas where education delayed sexual activity. Ironically, the very young respondents, in spite of their sexual activity, believed that the young do not get AIDS.

The pretest of the combined questionnaire touched upon widow inheritance and most respondents reported knowledge about the concept. It also asked who has the right of first sexual intercourse with a new bride; 90 of the 127 answered the husband but 15 mentioned other categories of relations such as brothers or fathers of the groom. The pooling of resources for the bride price may encourage the ceding of first sexual rights to others by the husband.

Of the total 187, five had previous experience of homosexuality, with four of the five reporting anal intercourse.

In effect, the range of observations from the understandably small Ugandan pretest population has provided insight into the potential for the investigation in a general survey.

Some 4 months before the pretest of the WHO survey instruments, a Cambridge University study group carried out another survey of knowledge, attitudes, and practices related to AIDS in Uganda (Anderson et al. 1988). Although respondents were chosen both from the general population and from people attending a clinic, the final report detailed the findings from the 476 respondents chosen from the general population in Kigezi District of southwest Uganda.

On the key issues of public perception of the seriousness of the epidemic, the study found that 95% of the respondents were aware that AIDS kills; 85% that there was no cure (Anderson et al. 1988, p.12). Knowledge of the modes of transmission was varied. Transmission through sexual contact, from mother to child, and through the use of unsterilized needles was reported by more than 80% of the respondents. As in the WHO-sponsored pretest, a number of misconceptions remained. Two-thirds of the respondents thought that AIDS could be transmitted through mosquito bites and about half of the respondents cited saliva and sharing domestic utensils as possible modes of transmission. In effect, the outcome of an AIDS education program in Uganda is mixed. Some accurate biomedical information has been passed on, but some misconceptions persist and have serious implications for the intrafamily support of persons with AIDS.

The Cambridge University survey also investigated the change in sexual behaviour in response to the AIDS epidemic. The information has to be interpreted in light of the respondents' perception of their personal risk of getting AIDS. Although less than 2% of the respondents spontaneously listed AIDS as constituting one of three health problems they faced, 31% responded positively when asked if they were at risk of HIV infection. Another 26% thought they might be at risk (Anderson et al. 1988, p.20-21). When asked if they had taken any precaution to avoid infection, a majority responded that they had modified their behaviour in line with promotional information: they said they were avoiding prostitutes and skin piercing instruments as well as restricting themselves to one sexual partner or abstaining totally.

Studies in the Caribbean

At first, the Caribbean appeared as if it would fall within the Pattern I countries, with HIV transmission being mainly recorded in homosexual encounters, but heterosexual transmission soon emerged as important. Also, as in Africa, prostitutes constituted a major reservoir for the virus. The

family planning programs in the Caribbean were stronger than in Africa, and a number were able to graft research into HIV transmission onto their normal activities. In the Dominican Republic, studies on effective condom use have been carried out among prostitutes, and sex workers have been recruited as extension workers in the propagation of safe sex and risk-reduction programs.

Research Needs

In the African and Caribbean context, the various phases of the life cycle have not been systematically studied, although experiences in childhood seem to be crucial to adult behaviour. The relative ignorance of social and sexual experiences in childhood in Africa is hardly surprising given the preoccupation of the early studies with adult activities. Now the potential contribution of such studies to the understanding not only of AIDS but of child physical and sexual abuse in these populations makes the topic legitimate.

Generalizations are risky when not backed up with facts. They provide a poor base for interventions. Yet, the extent of rape in African societies, rural or urban, is not fully known, and preliminary findings suggest some action is warranted. The circumstances of first intercourse, within or outside traditional initiation ceremonies, must be reexamined in light of the substantial risks faced by young women who are introduced to sex and STDs during their first sexual experience. Studies of the sequelae of early sexual experiences must go beyond the study of infertility to cover the other social costs.

Although marriage is nearly universal in Pattern II countries and sexuality is largely within the framework of reproduction, the circumstances that produce such a high marital mobility are unclear and deserve study as do the behaviours in marital and extramarital sexuality. These are the channels through which the married population is exposed to a wider sexual network. Poverty might be implicated in the degree of extramarital sexual intercourse, and the special circumstances that predispose both sexes to exploiting the poverty will reward investigation, further clarifying the dynamics of heterosexual transmission of HIV.

The cultural barriers imposed on the sexuality of women who have grandchildren are being less tolerated by women as the society becomes increasingly modern. The alteration of the social expectations of elderly women may produce different patterns of social, economic, and sexual behaviour. Unless these changes are tracked, they could spring epidemiological surprises in the unfolding of the AIDS epidemic.

In fact, all age groups attempt to escape the traditional sets of rules. The mechanism employed by individuals to avoid cultural and other constraints on their sexuality should form part of life-cycle studies.

Methods

Although the limited evidence from the pretest of WHO's survey instruments suggests that much will be learned from similar surveys of larger, more representative samples, the information collected by the questionnaire approach cannot meet all the needs of people attempting to control HIV spread. The data will help explain transmission, describing quantitatively the behaviours that respondents are prepared to report. They will not explain motives for given behaviours nor mechanisms through which some behaviours increase the risk of infection for some individuals and not in others. Consequently, much work is needed on validating the studies and on improving the mix of methods for sexual research. The role of qualitative approaches in sexual research has been unexplored, mainly because sexual behaviour does not lend itself to participant observation. However, issues of sexual ideology and the social structuring of sexuality would yield to an anthropological approach.

Ultimately, uncertainty surrounds the validity of sexual research findings, and the opportunities are limited for experimental designs, especially in preliterate societies. A precondition for public cooperation is to place sexual research in an altruistic and nonstigmatizing context. Unfortunately, sexual research relating to HIV and AIDS is presented in the crude framework of self-preservation, and association of research activities with official activities to curtail the spread of HIV and AIDS may not provide enough incentive for public cooperation. People's expectations and, hence, their cooperation will fall if the epidemic continues on the present trajectory. How researchers can ethically ensure public cooperation will become a problem.

Relevance

Also, the traditional gulf between research and application in public policy must be studied if it is to be bridged. A deliberate effort must be put into determining ways in which the urgency of the AIDS epidemic might be used to advantage in linking research and interventions. Is the professional training of some of the end users the basis of the intellectual divide? Are the methods and preoccupations of social science research responsible? Quantitative research has a timetable of its own. Do the delays in providing hard data irk policymakers and render them closed to the findings when received? Does the gap arise from the way in which research results are shared, i.e., passed on in conventional reports? People who promote family planning,provide counselling on reproductive health, and treat STDs are some of the end users. They are not traditional audiences for social scientists. Creating a new language of communication and collaboration and instituting channels of pragmatic exchange may not be familiar elements of a research agenda, but they may be key steps toward a workable AIDS control program.

I am grateful to Dr. Maxine Ankrah for the use of the unpublished and published results from her pretest of the WHO questionnaires in Uganda. I am also grateful to the Global Programme on AIDS for the opportunity given me to participate in the implementation of the programme of research on social and sexual behavioural aspects of the AIDS epidemic. Any faults in interpretation of materials are, however, entirely mine.

Table 1. Percentage of Women, Aged 20-24, Who Had Married or Had Given Birth at Ages 15-20 in Selected Countries of Africa and the Caribbean (UN 1987, p.99).

	Age at Marriage				Ages at First Birth		
	15	16	18	20	15	18	20
AFRICA	16	25	46	65	6	28	50
Benin	9	17	42	74	3	21	52
Cameroon	21	36	61	81	6	38	65
Cote d'Ivoire	18	33	60	80	7	44	71
Egypt	11	19	39	53	3	21	37
Ghana	9	20	48	72	3	29	56
Kenya	13	22	45	65	7	38	63
Lesotho	6	14	39	69	3	17	43
Mauritania	39	47	62	72	15	39	54
Morocco	11	19	36	53	3	19	36
Senegal	28	42	62	77	5	40	65
Sudan	26	33	47	57	11	31	44
Tunisia	18	2	13	30	0	3	16
CARIBBEAN	8	15	32	50	4	21	38
Costa Rica	4	9	23	40	1	15	34
Dominican Republic	13	22	43	61	3	23	44
Guyana	8	19	42	62	2	19	39
Haiti	8	14	30	48	1	11	23
Jamaica	13	29	59	77	3	36	57
Trinidad and Tobago	9	18	37	56	1	14	29

Table 2. Percentage of Women, Aged 20-24, Who Had Never Breast-fed and the Mean Duration of Breast-feeding in Months, by Country (UN 1987).

	Never Breast-fed	Mean Duration (Months)
AFRICA	1.6	18.7
Benin	1.5	19.3
Cote d'Ivoire	1.2	19.5
Egypt	3.1	19.4
Ghana	0.4	19.3
Kenya	1.0	18.1
Lesotho	1.9	21.3
Mauritania	0.7	17.1
Morocco	3.9	16.2
Senegal	0.6	20.0
Sudan	1.2	17.2
Tunisia	2.4	15.3
CARIBBEAN	7.8	9.5
Costa Rica	14.7	6.1
Dominican Republic	7.4	9.7
Guyana	6.4	7.5
Haiti	2.9	17.4
Jamaica	2.7	9.0
Trinidad and Tobago	12.6	7.0

Table 3. Distribution (%) of Women, Aged 40-49, by Status of First Marriage, by Country and Region (UN 1987, p.84).

	Status of First Marriage		
	Undissolved	Dissolved	
		Remarried	Not Remarried
AFRICA	65.8	22.9	11.3
Benin	65.6	27.8	6.6
Cameroon	65.0	20.5	14.6
Cote d'Ivoire	55.5	36.4	8.1
Egypt	72.5	13.2	14.3
Ghana	60.4	29.5	10.2
Kenya	76.9	11.2	11.9
Lesotho	72.4	3.0	24.6
Mauritania	44.1	43.2	12.8
Morocco	65.6	24.3	10.1
Senegal	57.5	40.4	2.2
Sudan	69.6	17.7	12.7
Tunisia	85.0	7.5	7.4
CARIBBEAN*	52.4	36.9	10.7
Costa Rica	75.3	11.5	13.3
Dominican Republic	47.4	38.9	13.7
Guyana	55.3	34.7	10.0
Haiti	46.7	44.0	9.2
Jamaica	37.1	53.9	9.0
Trinidad and Tobago	52.7	38.5	8.8

*Figures for Jamaica and for Trinidad and Tobago refer to dissolution of relationship with first partner.

Table 4. Percentage of Women Never Married in Five-year Current Age Groups and Singulate Mean Age at Marriage (SMAM), by Selected Countries and Regions (UN 1987, p.78).

	Current Age Group				SMAM
	15-19	20-24	25-29	45-49	
AFRICA	65	24	7	1	19.8
Benin	56	10	1	0	18.2
Cameroon	47	10	4	2	17.5
Cote d'Ivoire	44	10	5	0	17.8
Egypt	78	36	14	2	21.3
Ghana	69	15	3	0	19.3
Kenya	72	21	4	1	19.9
Lesotho	68	16	7	2	19.6
Mauritania	61	24	9	2	19.2
Morocco	79	36	12	0	21.3
Senegal	41	14	4	0	17.7
Sudan	78	36	11	1	21.3
Tunisia	94	57	20	1	23.9
CARIBBEAN	77	31	13	6	20.9
Costa Rica	85	45	25	10	22.7
Dominican Republic	72	27	10	3	20.5
Guyana	72	26	7	2	20.0
Haiti	84	41	14	1	21.8
Jamaica	70	12	4	2	19.2
Trinidad and Tobago	80	32	18	2	20.9

Table 5. Proportion of Women, 40 Years and Older, Who Had Been Married But Childless, by Type of Marital Union, in Selected Countries (UN 1987, p.335)*

	Monogamous Union		Polygamous Union		Divorce or Separated	Widow
	1st	2nd	1st	2nd		
Benin	1.7	2.9	2.2	3.9	16.7	8.3
Cameroon	8.8	33.2	11.0	33.3	23.4	9.4
Cote d'Ivoire	2.8	4.8	2.5	5.1	11.5	3.9
Egypt	n/a	n/a	n/a	n/a	n/a	n/a
Ghana	1.3	2.5	2.1	5.6	3.1	1.8
Kenya	0.9	9.6	4.5	2.5	14.9	2.6
Lesotho	4.6	34.2	7.7	28.2	11.4	1.3
Mauritania	0.0	0.0	0.0	5.4	9.5	4.5
Morocco	n/a	n/a	n/a	n/a	n/a	n/a
Senegal	0.0	6.2	1.7	6.1	22.2	0.0
Sudan	n/a	n/a	n/a	n/a	n/a	n/a
Tunisia	n/a	n/a	n/a	n/a	n/a	n/a

*n/a = not available.

Table 6. Measures of Childlessness and Behavioural Infecundity for Various Age Groups, Countries of the Caribbean (UN 1987, p.303).

	Percentage of Women With No Pregnancies At Ages:		Behavioural Infecundity For Women Aged:*			
	40-44	25-49	<35	35-44	45+	Total
Costa Rica	1.7	2.3	4.4	16.5	39.3	10.4
Dominican Republic	5.2	3.7	10.1	27.8	66.4	16.1
Guyana	7.0	4.1	9.9	37.5	64.5	17.5
Haiti	3.6	3.0	8.0	20.5	43.0	12.7
Jamaica	4.7	4.9	8.7	28.2	54.2	14.9
Trinidad and Tobago	4.6	6.4	7.5	21.0	36.4	12.1

*Among currently married nonsterilized women, percentage who were married continuously for 5+ years with open birth interval of 5+ years an no contraceptive use in this interval.

Research on Human Sexuality in Pattern III Countries

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Résumé en français. *A l'exception de quelques études anthropologiques isolées, la recherche sur la sexualité humaine dans les pays de tendance III est un phénomène relativement récent qui date des 20 dernières années. Elle a été principalement axée sur l'hygiène publique en matière de planning familial, d'avortement et de maladies transmissibles sexuellement (MTS). Dans les pays de tendance III, la problématique du développement socio-économique et de la croissance démographique a donné lieu à de vastes campagnes de planning familial, par exemple en Inde, à Sri Lanka, en Thaïlande, en Chine, au Japon et aux Philippines. Des recherches assez nombreuses ont été entreprises portant sur les meilleurs moyens d'assurer un système efficace de contrôle de la population. Elles visaient avant tout les couples mariés, parents de deux enfants ou plus. Parallèlement, des campagnes de promotion de l'éducation sexuelle ont été menées pour informer les adolescents et promouvoir de bonnes attitudes en matière de pratiques et d'hygiène sexuelles. Ces campagnes visaient à aider cette population plus jeune à faire face aux problèmes psycho-sociaux normalement associés à l'adolescence, et, en même temps, à s'attaquer au problème croissant des grossesses avant le mariage. Dans certains cas, par exemple, au Japon, la recherche sur la sexualité des adolescents et des jeunes adultes remonte aux années 20, bien avant les efforts accrus des 20 dernières années. Ces travaux antérieurs étaient des recherches cliniques menées par des médecins préoccupés par les désordres sexuels de leurs patients et la façon de les traiter. Ce n'est que beaucoup plus tard que les spécialistes des sciences sociales ont commencé à s'intéresser à ce genre de recherche et à élargir la portée des recherches scientifiques dans ce domaine.*

Dans beaucoup de pays de tendance III, la prostitution est tolérée de longue date dans de nombreuses couches sociales. Cette attitude, de même que la libéralisation des moeurs sexuelles, se sont traduites par une hausse alarmante des maladies transmissibles sexuellement (MTS). En conséquence, de nombreuses recherches avaient pour objectif de cerner l'ampleur des problèmes et de proposer des mesures de prévention. La prostitution chez les hommes a aussi beaucoup augmenté au cours des 10 dernières années et est devenue un sujet de recherche de plus en plus important. Ce phénomène social a été accentué par l'essor du tourisme et l'accroissement des pratiques sexuelles commerciales et des divertissements sexuels qui y sont associés. La question a été étudiée dans divers pays, notamment la Thaïlande et les Philippines. Face aux résultats de la recherche sur la prostitution et les MTS, certains pays sont aux prises avec un dilemme : car la publication de données sur l'incidence des MTS ou de l'infection par le virus de l'immunodéficience humaine (VIH), risque de faire fuir de nombreux touristes, et ainsi avoir uneffet négatif sur leur économie, dont la croissance dépend en grande partie du tourisme.

La recherche dans tous les pays de tendance III a été avant tout descriptive, les données étant recueillies au moyen d'entrevues et de questionnaires. La documentation comprend également divers articles scientifiques sur les comportements sexuels et les problèmes sociaux ainsi que les problèmes de santé connexes. La recherche a porté presque exclusivement sur les connaissances, les attitudes, les croyances et les pratiques, même si les données présentées sont assez fragmentaires. Très rarement a-t-on tenté de lancer des programmes faisant appel aux sciences du comportement psycho-social pour rehausser la qualité de la vie en matière de sexualité humaine.

Introduction

The scientific study of human sexual behaviour is relatively recent, with a few efforts in Germany and England at the beginning of this century. Better known are the U.S. studies that took place much later – statistical works of Kinsey and laboratory research by Masters and Johnson in the 1950s and 1960s. During the past two decades in the Western world, there has been an explosion of research and publications on human sexuality, including programs of sex education and academic courses in colleges.

Not so in Pattern III countries where academicians were aware of the work elsewhere but became involved only after the 1970s. The first scientific inquiries in Asia and the Pacific were carried out by Westerners, particularly by anthropologists who probed different cultures and discovered different sexual customs.

Anthropologists Cherry and Charles Lindholm (1980), for example, studied the Paktun community in Pakistan within the context of an Islamic culture. Marshall and Suggs (1972) studied the Mangaians in the Cook Islands in the South Pacific and documented customs that seemed to allow permissive sexual behaviour. Inhabitants of the New Guinea mountains have been the subject of a number of studies including that by Gardner and Heider (1974). The East Bay Melanesians were studied by Davenport (1965) and appeared to be quite active and permissive sexually. More recently, local researchers, only rarely in collaboration with foreign researchers, have conducted the studies. Outside funding from international organizations has played an important role in the emergence of these studies.

The behaviours that have been reported may appear permissive, but they do not imply liberal values and attitudes. Traditionally, in Asia and in Pattern III countries in general, sexual practices are not discussed publicly and certainly are not regarded as the subject of academic disciplines. Only within the last 20 years, have studies begun to take place within the context of public health rather than behavioural science.

That they have emerged at all is remarkable and is a result, first of all, of developments in the mass media, with cross-cultural interactions occurring as never before. Rapid changes in sexual customs and attitudes in the Western world, both in America and in Europe, have been brought to the attention of the rest of the world and have influenced local values and beliefs and contributed to a liberalization of attitudes.

Secondly, travel across countries has increased dramatically. In many countries, particularly in Southeast Asia, tourism has produced a rise in prostitution and in the sex trade. Truong (1983) mentions five countries affected by sex tourism: Thailand, the Philippines, South Korea, Taiwan, and Hong Kong. During the same period, especially in the early 1970s, the presence of U.S. military personnel contributed to the rise in the demand for prostitutes and sex-related services. More recent is the homosexual tourist trade, especially in the Philippines and Thailand, which is rapidly expanding. However, in most countries of the region, particularly in the Moslem world, commercial homosexual activities have not become a general phenomenon.

Intertwined with the increased sex trade is the sharp rise in STDs and more recently in AIDS. As elsewhere, this is a powerful impetus for sexual research. STD cases have increased despite the availability of health services in most areas. As for AIDS in this part of the world, numbers are still low compared with those in the Americas, Europe and Africa. However, known cases of AIDS may represent only a fraction of the problem, particularly in a country like Thailand with its 4 million tourists in 1989, 60% of whom are supposedly attracted by bargain-priced sex (Truong, 1983).

Another factor contributing to more research in sex customs and beliefs is the overall effort for family planning in countries where birth rates are high and resources insufficient to cope. Family

planning has provided a legitimate rationale to look into sexual mores and attitudes and has contributed to a debunking of myths about sex in cultures where sex was not to be mentioned publicly. A famous example is the campaigns conducted in Thailand by Meechai Viravaidya with festivals including condom-blowing contests and free vasectomies in public parks.

All these factors have combined to produce a beginning for sexual research in Pattern III countries; and the present report is by no means a comprehensive survey, even if the bibliography compiled is rather extensive. This review was conducted in Bangkok, at Chulalongkorn University, primarily from locally available sources. We tapped three databases: POPLINE through the services of ESCAP (Economic and Social Commission for Asia and Pacific), ERIC through the library of Srinakharinwirot University, and MEDLINE through the University of Hawaii. Some bibliographies and some syntheses of research results, such as the United Nations's *Adolescent Reproductive Behaviour: An Annotated Bibliography*, also proved useful.

Three documentation centres yielded additional information: the ESCAP library, the Thailand Information Centre at Chulalongkorn University, and the WHO local office. Other useful sources included the Department of Communicable Diseases and the AIDS Control and Prevention Centre of the Ministry of Public Health as well as the libraries of the Faculty of Medicine and the Institute of Population Studies at Chulalongkorn University.

The most frequent topics for research have been premarital sex, family planning and abortion. Most of the data for this report have been collected from Thailand because we are limited to information available primarily in Bangkok and to a relatively short time. We have dealt in this paper with only a part of the Pattern III countries, that is the Asia and Pacific region, including South Asia, Southeast Asia, the Far East, and the Pacific Islands. More specifically, the countries covered in this report include Bangladesh, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Melanesia, Nepal, New Guinea, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan, and Thailand.

The amount of information available is limited; language differences such as in the case of Japan, may exclude some of the available sources of literature; however, the main reason is probably that relatively little sexual research has been carried out in some of the countries. The paucity of sexual research may be attributable to cultural constraints or low priority given sexual research by national governments who are concentrating their efforts on research for socioeconomic development and population regulation.

Sexual Development, Knowledge, Attitudes, and Practices

Sexual Behaviours

Research on sexual behaviours during courting and dating is aimed primarily at adolescents, both in and out of school. In some cases (a Malaysian study by Yusof 1980 and a study in India by Mandol 1982), the sample included not only adolescents but also adults (aged 20 years and older). Research on courting and dating includes issues such as boyfriend girlfriend relationships, petting, and cuddling. Data are still rather limited but are useful in clarifying premarital sex, marriage, and sexual preferences.

Much attention has been given to the study of adolescent premarital sex since the early 1970s possibly because premarital sex is viewed as an indicator of rejection of social norms. It may also be viewed as a cause of other serious social and health problems such as the spread of STDs, the rise in unwanted pregnancies, and in abortions. Therefore, most of the research on premarital sex is used by groups formulating educational and counselling programs on such areas as sex education and family planning for adolescents. Research on premarital sex has been carried out in most of the countries in Asia, less so probably in China and in some of the Pacific Island societies. Most of the studies are surveys, often covering many subjects (more than 4000); examples are those by Chompootaweep et al. (1988) in Thailand, Anigan (1979) in the Philippines, and Cernada et al. (1986) in Taiwan. Many of the studies drew solely on adolescents who were students possibly because of two reasons. Students are readily reachable in a formal classroom or school setting and they are believed to have greater opportunities for sexual experiences than adolescents in general. The latter belief stems from the social grouping of students and their greater exposure to urban customs and values.

Studies on courting and dating lead to an

understanding of the psychosexual maturity of the young population in general and of their sexual experience in particular. Courting and dating mark a stage of sexual maturation, from childhood to adolescence. They are also an early expression of, and interest in, having social and sexual interaction with another person. Among topics covered in this area of research are age of first experience of dating, dating behaviours, particularly sexually related acts, number of boyfriends or girlfriends, numbers and regularity of dating partners, and attitudes toward parental approval. The findings differ by gender and by time. In general, men started dating earlier than women, e.g., in Thailand 6% of the male respondents had their first date when 10-13 years old, whereas only 2% of the female respondents had their first date at that age; for both sexes, the majority of first dates occurred between the ages of 14 and 17 years (Wuttiprasit, 1983). In Japan, according to a study by Asayama (1976), dating for young men increased gradually after age 13, but for young women the increase started a year later.

Age of first dating seems to be related to age of first masturbation. The implication is a correlation between sexual maturation, sexual desire, and outlets. In the Philippines, boys and girls first began masturbating at 13-14 years old, the boys sometimes persuading their dates to masturbate them (Jocano 1972). Data from Thailand and Japan are similar (Asayama 1976; Wuttiprasit 1983). Dating involved touching, embracing, petting, kissing and coitus (Jocano 1972; Asayama 1976; Wuttiprasit 1983).

A study from Malaysia reported that the majority of respondents dated two or more people before marriage (Yusof 1980). In a Thai study, the present lover or date for most of the female respondents was the first or second partner, whereas most male respondents were dating at least their third partner – usually someone younger than the boys being dated by female respondents (Wuttiprasit 1983). In Japan, according to Asayama (1976), respondents who were dating a regular partner made up 29.2% of the male respondents and 28.8% of the female. In a Hong Kong study of 42 single, pregnant women younger than 25 years, all reported having become pregnant by their boyfriends; the primary reason cited was romantic love and the secondary one, the prospect of marriage. About 50% had only one boyfriend (Tang 1982).

Parental influence on dating and choice of partner still seems to be important, although signs are that it is weakening in many societies. In the Philippines, for example, Jocano (1972) reported that parents could strongly object to their daughter's choice of boyfriend and put up barriers to discourage the relationship, but the efforts sometimes backfired, the daughter becoming pregnant in an attempt to force marriage. In Thailand, most adolescents have reported feeling compelled to seek their parents' opinion on their dates (e.g. Chaovalit 1978), the girls showing more reliance than the boys (Nitirach 1982).

Longitudinal changes in patterns of courting and dating tell much about sexual behaviours and sexuality in society. For example an increase in the length of time for dating increases opportunities for sexual contacts. Data available for time-span comparisons are rare. However a study comparing responses from Japanese students in 1952, 1960, and 1974 revealed distinct changes during the 20 years: acceleration of sexual development (e.g., earlier age of experiencing menstruation and male ejaculation) and sexual experience (e.g., earlier age of dating, petting, kissing) (Asayama 1976). Such comparisons are useful also in clarifying differences between girls and boys over time. For example, masturbation and kissing increased for both sexes, particularly for girls; homosexual behaviour appeared also to have increased, especially for boys. Factors contributing significantly to the latter change included change in traditional value-attitude systems and in availability of commercial information about sex. The results from this Japanese study suggest that differences between generations and genders as well as the sociocultural contexts and meanings of dating and courting are crucial (e.g., urban versus rural, adolescents versus adults, living with family versus living away from the family, and cultural norms in the community on dating and courting).

Premarital sex and virginity do not have the same meanings in different societies or even within one society. The concepts are perceived differently according to individuals and cultural groups.

The differences have confounded research. For example, the majority of studies in Thailand define premarital sex as genital intercourse. Virginity, as used in the local language for a questionnaire, primarily implies "having never engaged in genital intercourse" but can be understood as meaning "never having engaged in any type of sexual contact – even kissing and petting."

Therefore, many surveys that ask about "premarital Sex" or "virginity" have yielded only vague accounts of sexual behaviour before marriage, and the reports have not clarified what individuals perceive as virginity.

Experience in premarital sex includes diverse behaviours with someone of the same or the opposite sex: kissing, petting, mutual masturbation, oral sex, and anal and genital intercourse. However most researchers seem to have regarded premarital sex primarily, if not exclusively, as genital intercourse, studying other types of sexual contacts separately.

This distinction has been not just a matter of design but also a matter of conceptualization. To understand premarital sexual behaviours and attitudes, one must examine all sex acts and expressions, considering the individuals' physical and emotional development, sociocultural socialization and adaptation, related aspects of social institutions such as courtship and dating, sex services, and marriage. Societal or group cultures prescribing or prohibiting premarital sex need to be studied in detail over generation, between genders, and by demographic and socioeconomic characteristics.

Available studies have shown that, in Pattern III countries, female virginity is still highly valued, although it is difficult to say to what extent and how. Girls and women probably give a higher value to virginity than do boys and men. In Thailand, about half of male respondents considered virginity as a factor in mate selection. Differences in opinion were found between male and female respondents, urban and rural residents, and between in-school and out-of-school populations (Porapakkham et al. 1985). In most societies, religious and social norms militate against premarital sex, giving a high value to virginity prior to marriage. The strength and persistence of these norms and their application differ from society to society and even within a particular society. For example, in an urban area of the Philippines, male adolescents were much less concerned than adults about the virginity of their brides, and most adults viewed premarital sex and loss of virginity as unacceptable (Anigan 1979). In a Taiwan study of 7831 students in 1983, almost half of the female students who were married and aged 20-24 years had sexual intercourse before marriage (Cernada et al. 1986). In Hong Kong, approximately 50% of the female respondents in a subgroup had one boyfriend and engaged in sexual intercourse once a month (Tang 1982).

Some other studies have found considerable involvement in premarital sexual intercourse (Yusof 1980; Population Centre Foundation 1985; Sakondhavat et al. 1987), but several show a lower degree of premarital sex and a higher value attached to virginity. For instance, in Sri Lanka, virginity is generally held in high esteem because the strength and persistence of traditional cultural norms and social sanctions. In Sri Lanka, failure to show evidence of virginity on first intercourse in marriage results in the wife's being accused of engaging in premarital sexual intercourse and could lead to a dissolution of her marriage (Basnayake 1986). As elsewhere, however, the strength of these values varies according to age, sex, place of residence, and education. In Indonesia, all types of sexual relations outside marriage are prohibited by religious teachings and by law are condemned by the public. In fact, in Jakarta only 1.5% female respondents in a study were reported to have engaged in premarital sex (Sarwono 1983).

In general, 20-50% of adolescents in most of the countries studied have reportedly engaged in premarital sexual intercourse. Factors contributing to differences in the percentage include socioeconomic setting, gender, age, and place of residence of respondents, with rates being increased among urban residents, young men, older adolescents, and among students. Exposure to information, media, opportunities for private meetings, and parental influence can explain the differences.

Most of the research on premarital sexual intercourse has focused on the numbers who engage in such behaviour, the age of the first experience, and whether the participants use contraceptives. Little research explores the relationships between partners (e.g., prostitutes, pick-ups), where they met, whether sexual contacts were regular or casual, what the first partner's gender was, and what acts were engaged in. Number of sex partners, social descriptions of sex partners (e.g., age, occupation, nationality), and frequency and type of sex acts are important aspects of sexual behaviour for further studies on the transmission and spread of STDs.

A large number of research studies in Pattern III countries have dealt with homosexuality, mainly male homosexuality; although a few studies have investigated sexual relationships among lesbians, studies dealing with transsexualism have

been rare. Studies have been conducted in China, Japan, Melanesia (particularly New Guinea), and, more recently, in Thailand, Malaysia, Indonesia, India, the Philippines, Hong Kong, Vietnam, Taiwan, and Singapore. However, many of the studies, particularly from Japan, China, and Korea, are documentary research and journalistic observations. Surveys or case studies on homosexuality and transsexualism have been conducted in only a few countries such as Thailand (Chotiwattanatrakul 1983), Malaysia (Yusof 1980), the Philippines (Anigan 1979), and Singapore (Tsoi et al. 1977; Tsoi and Kok 1980), and none has been large scale survey.

The Malaysian study of 300 male and female respondents dealt with homosexuality as well as many other topics within human sexuality and contributed much to sexual research in Islamic societies. In the Malaysian study, 8% of respondents had experienced sexual intercourse with a member of the same sex. Interestingly enough, 6.7% answered "no response" and 0.3% gave "don't understand" as a response to the question. Of those who reported having had this experience, the majority had it with only one person. A majority of the respondents had correct knowledge concerning homosexuality. For example, 61% rejected the statement "Men who wear women's clothing are usually homosexuals;" 66% disagreed with the statement "Homosexuals are more talented than most people," and 88% disagreed with the statement "A man who exposes himself is a homosexual." However, the shortcomings in research requiring a judgment on such statements are clear. For example, 75% disagreed with the statement "A homosexual is born that way" and were considered by the researchers to be correct despite no scientifically definitive answer to the question. To date, no one has determined whether homosexuality is genetic, hormonal, psychologic, or sociologic.

Attempts to link knowledge and attitudes to social and cultural norms are valuable and are exemplified in questions like "In our culture, the demonstration of affection between members of the same sex is a normal part of growing up, true or false?" How knowledge, attitudes, and practice relate to other socioeconomic and demographic variables such as gender, age, place of residence, education, and religion, for which data are already available, also deserves study.

Less thorough studies on homosexuality have been done. For example, in a study in Thailand, those who reported ever having had homosexual relations accounted for 12% among male students and 3.6% among female students (Muangman 1988). Homosexual and bisexual practices seem to be more openly expressed and discussed in Thai society than in many other societies. In Japan, where attitudes and norms concerning homosexual and bisexual practices seem to be more strict than in Thailand, a study found that 7% of the male respondents and 4% of females had experienced homosexual contacts such as kissing, petting, and mutual masturbation. This study also detailed age of first experience (15-17 years old on average) and age of partners (mostly older than the respondents). A similar study about 20 years earlier found a lower percentage of male respondents who had such experience (Asayama 1976). This shows that comparative data over time could offer rich implications. However, in most societies, sexual preference is generally not openly discussed and homosexuality is not sanctioned or tolerated so the methods for research on this topic have to overcome such biases to produce valid results. Sampling procedures must be carefully planned because of the possible damaging consequences of public exposure. Some scholars suggest that homosexuality is one of the manifestations of human sexuality in most if not all societies, and studies should explore the diversity of homosexuality in place and time (Whitam and Mathay 1987).

In countries in Asia other than Korea, homosexual and bisexual relations are socially tolerated though not formally and legally, with evidence surfacing in novels, poetry, works of arts, and biographies. Religious teachings of disapproval exist for Islamic and Christian followers but not so much for Buddhists. In some tribal communities in the Pacific, homosexual contacts are a traditional component of local customs and without any religious inhibition. In designing surveys and in-depth qualitative studies in Asia and the Pacific, these social contexts should be taken into account.

Most of the research on sexual preference has been concerned with attitudes and beliefs. Little has been done to discover the practices. Variables left unexplored include actual behaviour, partners, socioeconomic factors, subcultures among groups of sexual preference including channels of mass media, etc.

In general, research on sexual practices is rather limited, the focus mainly being how much sexual experience sample groups have had, whether and when they have engaged in sexual intercourse, how long they maintain abstinence, whether they engaged in coitus during pregnancy or postpartum, whether and how often they masturbate, and whether they participate in exhibitionism. Most of the studies were done in the 1980s, and many have been conducted as background for programs to promote family planning. Studies on sexual abstinence, sex during pregnancy, postpartum sex, and sexual intercourse, particularly, have been contributions to family planning programs. Thus, some work in each of these areas has been done in most of the countries with Thailand and Singapore having supported the most research.

Existing data on sex acts and partner relations are still limited and fragmented. The majority of the research has been done among adolescents and covers petting, kissing, and genital intercourse. Such studies have shown that experience in kissing is quite common among adolescents, with some differences between boys and girls (Asayama 1976; Muangman 1988). Whether adolescents engage in oral sex or anal intercourse has not been studied, and attitudes and knowledge concerning these acts have not been examined in relation to sociocultural norms, psychologic effects (e.g., desire for intimacy), psychosocial-sexual identification, marriage and pregnancy concerns, and transmission of diseases. Recently, because of AIDS, a few studies have been looking into details about sexual behaviour of adults such as frequency of sexual intercourse and types of sexual intercourse (heterosexual versus homosexual). These studies, generally, have been done among special groups such as prostitutes and their customers (e.g., Sangsu and Jirarojwatana 1987).

Research on masturbation in Thailand, Malaysia, Hong Kong, Sri Lanka, Singapore, and Japan has been directed toward adolescents, and sample sizes for the surveys have ranged from a few hundred to several thousand. The researchers viewed masturbation as part of sexual development and as a normal sexual outlet; yet the findings have not been explored in relation to sexual preference and sexual contacts. For instance, can teaching how to masturbate by friends or older men/women lead to homosexual behaviour? Does strong prohibition of masturbation reinforce other means of sexual outlet such as visiting prostitutes and engaging in casual sex?

Almost no research has been conducted on unusual behaviours; only one study was found dealing with exhibitionism. Behaviours such as voyeurism and fetishism, have been studied in the West by psychologists and psychiatrists, but in Pattern III countries, these professions may have been concerned with behaviours that occur more frequently.

Marriage

Data on patterns of marriage, age of marriage, mate selection, residence, marital status, household composition, cohabitation, marital disruption and dissolution have been collected through small surveys, national surveys including census, and cross-national surveys. A few anthropological and qualitative studies have also been conducted. Large cross-national surveys include the Asian Marriage Survey (1978-79) covering Thailand, the Philippines, Indonesia, and Pakistan; the World Fertility Survey (1974-78) studying Bangladesh, Pakistan, Nepal, Sri Lanka, Thailand, Indonesia, and the Philippines, Malaysia, Korea, Hong Kong, Japan, and Fiji; and the compilation of data from the United Nations (UN) *Demographic Yearbook*. However, coverage is not consistent. For instance, data on legally induced abortion are available for only three countries and for certain years: Japan 1970; Singapore 1971-85; and India 1972-85. Data on live births and legitimate live births (which can produce information on illegitimate live births) are available for Japan and the Philippines for the years 1965-85; and for Afghanistan, Brunei, Hong Kong, Korea, Malaysia, Singapore, Sri Lanka, Thailand, Fiji, Samoa, Guam, Cook Islands, and other Pacific islands for 1977-85. Data on age at marriage are also available in UN yearbooks but only for some years and for only Japan, Singapore, Hong Kong, Fiji, and the Philippines.

Age at first marriage differs among societies, as can be seen from the mean ages of women (Table 1).

The trend is toward delaying marriage (Smith 1980; Coale 1983). For example, in Thailand during 1964-68, women married, on average, when they were 19.3 years compared with 20.1 in 1979-84 (Knodel et al. 1987). In the majority of countries, the age at first marriage was related to gender, place of residence, educational attainment, and occupation

(Smith 1980; *Population Reports* 1985; Knodel et al. 1987).

Preferred age at first marriage, though opinions differed among countries, ranged from 10 to 25 years. Gender influences the difference: for instance, women prefer a younger age than do men (Chaovalit 1978; Basnayake 1986; Sakondhavat et al. 1987; Tan Poo Chang et al. 1987; Pitaktepsombati 1988). In a few countries, the ideal age at first marriage was lower overall but the men still preferred a higher age than did women. For example, in India a study found that the ideal age ranged from 15.9 to 22.6 years (Khan et al. 1979).

The increase in age at first marriage has implications for behaviours. For example, it could lead to an increase in the proportion of single men and women, to an increase in the frequency and numbers of multipartner sexual contacts. No research has examined these issues.

Another important issue is that of marriage versus co-habitation. Data available indicate the proportion or numbers of marriages endorsed by legal procedures or traditional ceremonies. In most countries, marriages are registered, and the register is the source of data on numbers of marriages. For example, in Thailand in 1985, the marriage registration office of the Ministry of Interior indicates there were 343,134 marriages.

Similarly, at a cross-cultural level, the UN demographic yearbooks list published data on numbers of marriages and on rates of marriage, extrapolated from the legal marriages performed and registered per 1000, mid-year population. For Bangladesh in 1982 the figure was 833,265 (rate 9.0); in Hong Kong in 1985 it was 45,056 (rate 8.3); in Japan in 1985 it was 735,850 (rate 6.1); in Singapore it was 23,466 (rate 9.2), and in Thailand it was 343,134 (rate 7.7) (UN Demographic Yearbook 1986). The data are as reliable as the system of registering and recording the marriages, and they exclude traditional, unregistered marriages.

Attitudes and practices concerning sexual behaviour and sexual relations within marriage were one focus by the Asian Marriage Survey, one of the few studies on such issues. In Thailand, where married couples were interviewed in 1978-79, sexual experience among men before marriage was not regarded as totally acceptable, although almost all male respondents had engaged in premarital sexual intercourse. One-half of the women reported having had premarital sex. The majority of the respondents in both urban and rural areas disagreed with the idea that women should have some sexual experience before marriage. The majority of respondents met their spouses-to-be by themselves, although the proportion of those who met their spouses-to-be through an introduction by someone else was higher in urban than in rural areas. Regarding sexual relations between husband and wife, the only information available from the survey concerned demand for sex and response. The majority of respondents agreed that, if one spouse wanted to have sex and the other didn't, the unwilling partner should go along with it, particularly if the woman were the uninterested partner (Chamratrithirong 1984).

Other meaningful data are available from a demographic and health survey that was carried out in many countries, including for Asia, Thailand, Sri Lanka, and Indonesia. Data on practices of periodic abstinence and withdrawal indicated, for example, that in Thailand, among currently married women aged 15-49 years, 28.6% knew about the contraceptive method of periodic abstinence and 27.5% knew about withdrawal. Only 0.9% of the respondents were using each method (Chayovan et al. 1988).

The data suggest that male supremacy still exists in sexual behaviour, the issue could be illuminated further by whether, when, and why married partners stop having sex; whether married partners should be entitled to extramarital sex, etc. The impression is that extramarital sex for men is acceptable, given the expansion of the sex-services industry.

Data on divorce are available for several countries from 1949 to the present; the data are not complete for Malaysia (1975, 1976, 1979, 1981), Indonesia (1981, 1982, 1984), and Singapore (1979-86). In addition, the data have limitations. For instance, the divorce rate is calculated from the legal divorces granted under civil law of each country. This rate underestimates dissolutions because of the lack of efficiency of the divorce-registration system. Moreover, in some societies, the marriages are not universally registered, and divorces among couples not legally married would not be included in official statistics. The data have been drawn from government reports (Table 2).

The Asian Marriage Survey reported the grounds for divorce as perceived by husbands and

wives. For Thailand, the prime reason used as ground for divorce was that one spouse (husband) or wife) either had an affair with a third party or had a new lover (Chamratrithirong 1984).

Complementing large surveys, which give a gross overview of marriage-related issues is qualitative research, which to date is still limited in the region. Some anthropological studies on family or fertility include examination of marriage, for example, Nag (1968), Singh and Narayan (1979), Mougne (1981), and Reddy (1983). Also, some attempts have been made to use alternative qualitative research techniques such as focus-group discussions (Pramualratana et al. 1983), and some have depicted marriage by a study of old documents and qualitative observations. These studies help put the issues into context and assist the examination of newly acquired data as well as the design of further research. Examples include work by Pieris (1956) and Rabibhadana (1983).

The majority of studies have presented in terms of empirical phenomena, although a small number have addressed methodological issues or research strategies for the study of marriage (Gamage 1983).

Sex Education

Sexual maturation, including the acquisition of knowledge and the development of appropriate behaviours, is one of the major tasks of adolescents. The lack of proper knowledge on sexual issues along with increasing numbers of sex-related problems such as unwanted pregnancies and STDs point to the need for some remedial action. Generally, sex education is controversial. On the one hand, some people see that sex education provided to children and adolescents helps reduce sexual problems both during youth and later on. On the other hand, many believe that teaching about sex to adolescents fosters permissive behaviour and promiscuity, going against traditional values. For example, adolescents are urged not to engage in premarital sex, and at the same time they are instructed on how to use contraceptives. Does this approach encourage experimentation? Perhaps to avoid some of the controversy and to expand the scope of the curriculum, sex education is sometimes called family life education, and UNESCO has supported population education in the schools. Basic population issues, human reproduction, and family planning have become part of the curriculum. National population-education programs began during the 1970s in about 12 countries, primarily in Asia: Bangladesh, India, Indonesia, South Korea, Malaysia, Philippines, Sri Lanka, Singapore, and Thailand.

A number of surveys have been conducted on attitudes toward sex education among adolescents. The majority of the studies have been concerned with students 19 years or younger. Sample sizes have ranged from a few hundred to a few thousand (Lui 1983 in Hong Kong; Cernada et al. 1985 in Taiwan).

Some baseline studies have sought to find out what goals and contents would be acceptable to the teachers and communities in India, the Philippines, Thailand, and Taiwan (*Population Reports* 1982). However, knowledge on human reproduction and sexuality among teachers is limited, and talking about sex is still considered an uncomfortable task. Attempts to study student misinformation and misconceptions as well as needs and learning styles in the area of sex are relatively recent and not in depth.

In Thailand, studies on sex education and family planning have shown that adolescent students generally have positive attitudes toward sex education, boys being more open to sex education than girls (Siragorn 1977; Sukhawong 1977; Bhodhisarn 1981; Boagnam 1985; Pitanon 1985). Level of knowledge, particularly about STDs, in some areas was found to be low (Grasaekulrat 1988). A survey of teachers showed that, in their opinion, sex education should begin during the last years of secondary education – grades 9-12 (Sangthaitaweeporn 1987). Age of students and exposure to opportunities for sexual experience seemed to be two of the issues considered for target group selection.

In Taiwan, Cernada (1986) reported that secondary students still lacked basic knowledge about contraception and reproductive health, and yet these topics were not taught in high school courses. Similarly, in the Philippines, teaching of sex education was still limited. In a study of 5204 individuals 15-24 years old, only one-half reported having had population education at school (Population Centre Foundation 1985).

Some limited attempts have been made to educate college students in various countries. Some studies have been designed to find basic information that would lead to suitable content for sex

education, and some studies have been designed to measure and evaluate the impact of such education. For example, in Thailand a study was done by Sakondhavat et al. (1987) in three vocational schools using pretest and post-test procedures. After the team's sex education had been introduced into the curriculum, knowledge and attitudes toward sexual and reproductive health and family planning improved.

In Hong Kong, a study done by Chan (1986) with Chinese medical students concluded that sex education in colleges was needed. In general, respondents were misinformed and held misconceptions about sexuality and reproductive health, relying more on the media than on health professionals as a source of sex information.

Out-of-school youths have been neglected in most research and programs on sex education, although a few countries in Asia have attempted to provide all young people with population and sex education. For example, in the Philippines, since 1973, individual counselling of youth has been pursued, as has counselling and education through organizations such as youth clubs (*Population Reports* 1985). In Thailand, there have been government programs integrating information about population and family planning with literacy training, school-equivalency education, and vocational training for out-of-school youth (Porapakkham et al. 1985). Although no studies have been designed and conducted to assist in the development of curriculum and evaluation of these sex-education programs, several studies of out-of-school adolescents have yielded results that could be useful. For example, out-of-school groups differ in socioeconomic and demographic characteristics from in-school groups, including a higher proportion of married adolescents in the out-of-school group. Also, the proportion of separated parents was higher for the out-of-school group, and their knowledge concerning puberty changes and contraceptives was better than their colleagues still in school, although their experience in the use of contraceptives, especially condoms, was less. Virginity as a factor for mate selection was less valued by the out-of-school group particularly in rural areas than by the group in school. Place of residence (Bangkok, urban, rural areas) was an important variable in the KAP of the respondents (Porapakkham et al. 1985; Muangman 1988). Similarly, another Thai study of adolescents, aged 14-15 years, found that the in-school group differed markedly from the out-of-school respondents in KAP (Pitaktepsombati 1989). Other studies mentioning KAP on sexual behaviour differed according to whether an adolescent that was in school were Kumari (1985) in India, Tang (1982) in Hong Kong, and Saw Swee-Hock and Wong (1981) in Singapore. However, in general, research on out-of-school children, adolescents, and young adults has been minimal, and data have not been fully utilized in the identification of target groups or the development of sex education programs for the out-of-school population.

Knowledge, Attitudes, Values, and Beliefs

Most studies on sexuality deal with knowledge and attitudes on sex and sex-related issues, and values and beliefs have not been given much attention perhaps because knowledge and attitudes are easier to measure and to influence.

A majority of the studies deal with sexual experience, STDs, family planning, and sexual behaviour. A few studies probe other issues such as religious ethics toward sexual behaviour, social value of virginity, and the ideal age for marriage. Socioeconomic and demographic factors have also been examined in many of these studies, which are mainly surveys among populations 24 years or younger.

In Thailand, Sri Lanka, Taiwan, the Philippines, and Japan, samples have been primarily adolescent students and in a few cases sex-service workers, patients, and members of the public. In Singapore, a series of surveys was done among women and was a good example of what can be done among the general population on a variety of issues dealing with sexuality (Atputharajah 1984a, b, c, d, 1985). Clearly, studies of adolescents in schools are important but not sufficient.

In studies among Thai adolescents, 80% of the respondents knew about methods of contraception, especially condoms and pills (Sakondhavat 1986; Chompootaweep et al. 1988; Pitaktepsombati 1989), and attitudes toward family planning were positive (Pitaktepsombati 1989). In one study, use was low, with 6% of young men using condoms and less than 1% of young women using oral contraceptives (Chompootaweep et al. 1988); in another, however, 20% of those surveyed (vocational students) were using contraceptives

(Sakondhavat 1986).

In Taiwan, Cernada (1986) found that the majority of the student respondents lacked basic knowledge on reproduction and contraception; however, a large proportion had engaged in premarital sexual intercourse.

In a Malaysian study (Yusof 1980), religion and race affected KAP concerning sex-related matters. The Chinese had more experience and knowledge than the Malays on such issues as abortion, sexual myths, and sexual relations.

In Singapore, most adolescent respondents had basic knowledge on reproductive health and contraception, and most approved family planning, although only a few had ever used contraceptives (Saw Swee-Hock and Wong 1981).

In general, knowledge among adolescents about STDs is limited. Although in one Thai study, one-fourth to one-third of the adolescents had some knowledge (Chompootaweep et al. 1988), in another study the student knowledge about STDs was lower (Grasaekulrat 1988).

A small proportion of adolescents (3.6%) knew how to use condoms and knew that condoms could be used to prevent STDs (Sakondhavat 1986); 40% of the respondents had negative attitudes toward those having STDs. Several studies have shown a gap between knowledge and practice concerning condoms (Tasanabunjong 1975; Dangpium et al. 1983). For example, a study of STD clinic patients in Bangkok found that 65% had good knowledge of STDs, a majority had been infected before, 60% knew that condoms could prevent STD transmission, but 23% admitted having had sexual intercourse while infected with STDs (Thanupprapasr 1985). Condoms were viewed as a means of birth control more than a way to prevent the spread of STDs (*Population Reports* 1982).

In a study of sex-service workers in Thailand, 41% had been infected with STDs, and most expressed the desire to gain more knowledge on reproductive health and STDs (Muangman and Nanta 1980).

Only a few studies have dealt with AIDS and the ones we identified were done in Thailand. One study among those with high-risk behaviours (IV drug users and male and female prostitutes) found that more than 80% knew how HIV was transmitted, but two-thirds had some misunderstandings. The most important source of knowledge was newspapers. These respondents engaged in anal sex and sharing needles, but in general, did not use preventive measures. During the previous year, 25% of the drug addicts, 30% of the male prostitutes, and 67% of the female prostitutes had been infected with an STD (Muangman 1988). Half of the rural and urban adolescents interviewed had correct knowledge on HIV transmission and also on preventive measures. Almost all knew AIDS was serious, but only two-thirds knew that AIDS was incurable. A fair amount of misunderstanding still existed among them (Sittitrai 1989).

Commercial Sex Services

Commercial sex services are a traditional and integral part of sexuality in every society. Their forms have changed, but they have persisted: in prostitution, sex tourism, and pornography (media and entertainment). Much of the literature on sex tourism and pornography is journalistic or qualitative. Few data have been collected systematically, and the reliability of what has been collected is difficult to check. Among the more substantial studies on tourism and prostitution are the works of Truong (1983) on Southeast Asia, of Mingmongkol (1981) on Thailand, of Jones (1986) of the South Pacific.

Pornography in its many forms and media, both heterosexual and homosexual, is closely linked to sex services. For instance, it is available in places where prostitutes are also available and many magazines advertise prostitutes' services. Yet, as far as we know, no study has been done on the relationship between pornography and prostitution.

Prostitution has been studied in most of the Asian countries. Female prostitutes have been interviewed about their socioeconomic and demographic backgrounds, including income and marital status, reasons for engaging in such work, history of STD infection, and experience in STD prevention. A few studies have asked about sexual behaviour and the types of sex acts they engage in with customers, and their attitudes toward being a prostitute. Some of these studies have been conducted in the work settings of prostitutes; others in or through STD clinics. Persons other than prostitutes, such as customers, have been included in some samples. Often, to simplify procedures and to reduce difficulty in recruiting respondents, researchers have selected samples from among STD patients and students, inquiring about age at first

sexual experience with prostitutes, reasons for visiting prostitutes, frequency of visits, and practices in STD prevention.

In countries other than Thailand, STDs and health have been the focus of studies in relation to prostitutes, e.g., the work of Lee (1980) in Singapore and the work of Simoes et al. (1987) in India.

Generally, the prostitutes interviewed numbered a few hundred, but some studies involved a thousand or more prostitutes. The works of Sangsue and Nantavisit (1983), of Augowitchai (1986), and of Muangman (1988), all involved large sample groups in Thailand and received much attention partly because of the size of the prostitute population and partly because of the rapid expansion of the sex-service industry from the time of the Vietnam war until the current boom in tourism. The government, in an effort to contain the spread of STDs and more recently AIDS, has contributed resources to the attempts to clarify prostitution in the country. Similarly, prostitution has become a major industry in the Philippines, and most studies on this subject in the region have been done in either Thailand or the Philippines.

Prostitutes in Thailand reported their first sexual experience occurred when they were 13-15 years old; most had completed only a low educational level. They were from low-income families from the rural areas. The majority were misinformed about STDs, STD prevention, pregnancy, and birth control. As already mentioned, 80% had been infected at some time with an STD, and the majority did not stop working while infected (Tasanabunjong 1975; Manasririsuk 1979; Muangman and Nanta 1980; Phongpaichit 1981; Mangkarawirat 1985; Pakdewongse 1986; Augowitchai 1986; Thiratham and Kittirat 1987).

A study of 700 respondents (drug addicts, male prostitutes, and female prostitutes) (Muangman 1988), showed a major difference in the sexual activities of the male prostitutes (Table 3). In another study of those engaged in homosexual contacts in the sex industry (Sangsu and Jirarojwatana 1985), a majority of the respondents had engaged in oral or anal sex.

Not many data are available on other countries, although Truong (1983) depicted prostitution in Southeast Asia in terms of the health and psychosocial problems faced by prostitutes.

Sexual Health

Family Planning and Contraception

Much research has been conducted in an effort to control population growth, with studies of the numbers of users, types of methods and devices used, and efficiency. The focus has usually been on married people with at least two children. Less research has been done on reproductive behaviour of married teenagers. In Bangladesh, 85% of women are married by the age of 18, and they give birth for the first time while very young. Family planning, wherever used, is introduced later (WHO 1983). The proportion of married women reporting knowledge of contraceptives varies from country to country, but more than 80% know about some method of contraception.

The best known methods are oral contraception, sterilization, IUDs, and natural family planning. The percentage who know about condoms is less consistent: 88% in the Philippines, 77% in South Korea, and about 50% in Malaysia, Sri Lanka, Thailand, and Indonesia. In Pakistan and Bangladesh, approximately 20% know about condoms.

Nevertheless, at least 50% of married people practice contraception in Korea, Sri Lanka, Thailand, Hong Kong, Singapore, Japan, and Taiwan. The percentage is lower than 50 in Indonesia, Malaysia, Nepal, Pakistan, the Philippines, and India. The most frequently used methods are oral contraceptives and sterilization. Among married couples, condoms are reportedly used by less than 10% except in Hong Kong (15%).

Some studies have reported massive ignorance among adolescents about contraception. Even where knowledge about contraception has been adequate, many young people failed to use contraceptives. The young women reported being afraid of side effects of oral contraception; young men admitted to being careless even when they had easy access to condoms. They reported using inadequate means of contraception such as a variety of soaps, detergents, etc., which can cause health problems and do not prevent pregnancy or STD transmission.

Pregnancy and Abortion

Increasingly, sexual activity is outside marriage, particularly among youth. The result is a rise in

unwanted pregnancies in both the less-developed countries of Asia and the urbanized countries such as Japan and Singapore. In most of these countries some form of legal abortion is available. The rate of abortion is highest in Japan and is relatively high in Singapore and Taiwan. However in many Asian countries, unmarried women – even prostitutes – choose to keep their babies. Abortion is highest among prostitutes and women who work in massage parlours, with many obtaining multiple abortions (as many as eight) (Hiroi and Suzuki 1973; Purandare and Krishna 1974; Saw Swee-Hock 1979; Muangman and Nanta 1980; Wong and Rataam 1980; Mandol 1982; Hayashi 1983; Mangkarawirat 1985; Solapurkar and Sangam 1985; Augowitchai 1986).

Discussions about unwanted pregnancies and abortions in the literature in general are about special populations whether it be unmarried adolescents or prostitutes. By and large, within the context of the Asian or the Muslim culture, social pressures are strong to preserve virginity until marriage (WHO 1983).

Sexually Transmitted Diseases

STDs vie with family planning for the area where most of the research on sexuality has been conducted in Pattern III countries. Annual reports of the regional director of WHO have noted progressive increases in STDs and have underlined the complex public health problems that these represent for the region. Research has been mainly to determine prevalence of the various types of diseases and to improve diagnosis and treatment. Some research has been concerned with education and prevention. In many countries, the STDs are closely linked to major social and cultural phenomena and in particular to prostitution, urbanization, tourism, poverty, and limited natural resources.

The growing epidemic of STDs extends to Asia and the Pacific; it is probably more serious than described in official reports because accurate statistics are difficult to obtain and these diseases are greatly underreported. The two most often reported diseases are gonorrhoea and syphilis. The magnitude and distribution of the STDs are not exactly known, but in Thailand the rate of infection has been estimated as high as 17% for the total population and 70% for the 700,000 prostitutes now active in the country (Marchand 1987). In Papua New Guinea, the rate was 6% in 1983 (Lombange 1984), and in Bangladesh and Bhutan, no data are available (WHO 1987).

Treatment for the two key STDs became relatively simple with the advent of penicillin, and now alternative treatments are readily available. The challenge with STDs has been to prevent their spread (*Population Reports* 1983). Although China has often been cited as having launched the most successful national STD control program in Asia, most programs have emphasized controlling STDs in prostitutes because contact with prostitutes has been estimated to account for as much as 90% of reported STD cases (*Population Reports* 1983).

The AIDS crisis has prompted new interest in the use of condoms (*Population Reports* 1982). A recent study has shown that more than 50% of educated male adolescents who visit prostitutes in Thailand use condoms (Koetsawang 1987). These figures reflect the proportion of users among educated people and probably are much higher than rates for the population in general. Thus, the vast majority do not use preventive measures. Education programs, by and large, have been directed to in-school populations with little use of mass media because of sociocultural constraints. Even within the formal education system, rarely does one find personnel who feel confident and comfortable enough to deal with this topic clearly and effectively (Chompootaweep et al. 1988).

Acquired Immunodeficiency Syndrome

The introduction of HIV infections in Pattern III countries came in the mid 1980s, so the prevalence is much smaller than elsewhere in the world (Piot et al. 1988). However, statistics on cases of AIDS and HIV infections in the region are difficult to confirm and probably do not provide an adequate picture. Some health officials do not yet view AIDS as a serious public health issue, and some hesitate to report AIDS cases for fear of hurting tourism. Many still consider AIDS an imported disease, the product of Western sexual promiscuity. Nevertheless, evidence is that the number of AIDS cases is rapidly increasing. For example, in Thailand, the first case of AIDS was reported in September 1984, and up to last year, published cases totalled about 10. However, the statistics released by the Ministry of Public Health were 194 for January 1988 and 5600 for April 1989, including cases of AIDS, ARCs, and

HIV seropositives (Anonymous 1989). The Philippines at present reminds one of the Thai picture 18 months ago. Extensive testing for AIDS, mainly in areas around USA military bases, has revealed 22 cases of full-blown AIDS and 100 HIV seropositives. The figures might reach the thousands within a year. In its *Weekly Epidemiological Record* of 6 January 1989, WHO reported a total of 384 AIDS cases for Asia and the Pacific! As Dr Betty Agee said in reference to the small numbers of cases identified in Oceania: "You may not be looking for it; you may not know if you see it; and because of the long incubation period of the virus, it may be slower to show up" (Usher 1988). Within the next few years, the AIDS crisis in Pattern III countries will probably assume dimensions much larger than imagined at present.

The pattern of HIV transmission varies from country to country. Japan, for instance, has reported that 83% of individuals with haemophilia have been infected with contaminated blood; 8% of homosexuals and 6% of heterosexuals have been infected through sexual transmission (Tamashiro et al. 1987). In Thailand, on the other hand, 87% of people who have tested positive for HIV are intravenous users of drugs, and only 3% were infected through sexual contact (Anonymous 1989). In India, indications are that 10% of female prostitutes are seropositive (Simoes et al. 1987). As for parenteral transmission through transfusion of HIV-infected blood or perinatal transmission, no evidence has been documented outside Japan.

Programs to prevent the spread of AIDS have only started. Japan has reacted to the danger and has launched a number of educational programs to emphasize that the use of condoms, sexual abstinence, and monogamous relationships are the only effective means of avoiding HIV infection. Condoms are fairly widely known in Pattern III countries (more than 50%), but use of condoms is currently quite low, even among high-risk groups (Goldberg et al. 1989). Successful educational programs are sorely needed and can be launched with input from the social and behavioural sciences. Programs must be based on the knowledge, attitudes, and practices within various local cultures and beliefs. The messages for different populations (prostitutes, adolescents, homosexuals, drug users) must be appropriate; they must be devised to maximize the impact of prevention campaigns. A good example of an appropriate message is the cartoon video *Survivors*, designed to teach street children about AIDS. This videocassette is being produced by Street Kids International and the National Film Board of Canada in consultation with WHO; it is an effort to reach an estimated 40 million children and adolescents living on the streets, increasingly vulnerable to AIDS.

Health Programs and Counselling

Proper knowledge and attitudes eventually leading to better practices in the field of sexuality can be promoted by sound health programs and good counselling. Extensive population-education programs have already been set up in Bangladesh, Hong Kong, Indonesia, South Korea, the Philippines, Singapore, and Thailand (*Population Reports* 1985), with similar programs being implemented elsewhere in the region. The programs have been planned within the wider scope of health and development, and an integrated approach has proved more successful than a focus on, for example, family planning alone. Monitoring of such programs, however, has been inadequate, relying on indicators such as birth rates, numbers of contraceptive users, etc., which do not provide much insight into sexuality.

Population Reports entitled its 35th issue [Series J, 1987, 15(3)] "Counselling makes a difference." The issue was written primarily in the context of family planning, but the "difference" applies to the whole area of sexuality. WHO has been supporting a number of training programs to enhance counselling and has funded two recent projects in Thailand (Koetsawang 1987; Kasantikul and Barry 1988). The first one has to do with peer counselling among adolescents to promote sex education and reduce STDs; the other, aimed at school counsellors, has been designed to enhance ability to deal with sexuality programs among secondary school students. Both projects have proved highly beneficial for the trainees and for the target population of adolescents. The counsellors, besides acquiring more accurate knowledge about sexuality and STDs, have gained self-confidence and security in dealing with these issues. As a result, an increasing number of youths have come to them for guidance.

Conclusions

Appraisal of Sex Research in Pattern III Countries

Pattern III countries represent more than half the population of the world – a multitude of cultures and traditions, some of the oldest in the world. Needless to say, life styles, patterns of marriage and intimacy, and sexual value systems differ greatly. For practical reasons such as availability of data, the present report on research on human sexuality has focused on a selected number of countries in Asia and the Pacific.

By and large, the research in this field is rather recent, over the past 30 years, and has been mostly descriptive. It has been conducted within the context of public health, particularly in the areas of family planning, abortion and STDs and has been concerned with special populations such as women of reproductive age, adolescents, prostitutes and women in the service industry. Often, data published have been simple tabulations of information gathered by health workers among people coming to health clinics and hospitals. Samples are not representative of the population as a whole.

Most of the KAP research has been conducted within the context of sex education and has been aimed at adolescents. Some studies have been directed at young couples, and early studies were part of the family planning programs initiated some 30 years ago. More recently, particularly since the AIDS crisis, efforts have been directed at special populations such as prostitutes both male and female, IV drug users, and street children.

Basic research questions and designs have often been weak, not to say simplistic. If health workers and educators feel discomfort when dealing with the particulars of sexual behaviour, subjects of surveys are even more reluctant to answer questions concerning behaviour that has always been considered private and personal. As a result, one can always question the validity of information volunteered in interviews or even in anonymous paper-and-pencil surveys. For example, in a survey recently of 9907 Bangkok high school students, up to 80% answered that they did not engage in petting, kissing, etc. or declined to answer; teachers who administered the questionnaires often noticed the uneasy behaviour of the respondents such as giggling, joking (Kasantikul and Barry 1988).

Another major difficulty in doing and interpreting sexual research arises from definitions and meanings. Respondents have their own definitions of virginity, marriage, divorce, infidelity, etc., and these may not correspond to those of the researchers. If research on marriages and divorces deals only with legal unions and dissolutions, can the findings reflect reality when vast numbers of people live together without legal arrangements?

Little research has attempted to describe sexual practices, the work of Jocano (1972) in the Philippines being one of the few efforts. Research on homosexual groups is also limited although homosexual practices may be tolerated in these countries to a greater extent than elsewhere in the world. Systematic research on such practices has been rare and has tended to be conducted by researchers from outside the region with the intent of proving the universality of homosexuality (Whitam and Mathy 1985).

Identification of Research Needs

The region must have better sexual research if it is to curb the spread of HIV. At present, the data on HIV infections in most countries are unreliable. The numbers of HIV-seropositive cases are probably much higher than reported, and the region needs national HIV-testing programs that are capable of providing data on HIV seroprevalence, seroincidence, and patterns of disease transmission.

A comprehensive prevention and control program should include research on knowledge, attitudes, beliefs and practices in the population in general as well as in the so-called high-risk groups. Risk groups in Pattern III countries may have to be defined differently from those in Pattern I countries; it might be more appropriate to talk of risk behaviours without reference to any particular social or cultural group. Behavioural research serves as a backstop for preventive endeavours.

Some of the areas where research is needed at present are:

- Adolescent sexual behaviours, especially now that sexual activity among urban teenagers and college students seems to have increased.
- Marriage, divorce, cohabitation, and separation – not solely statistics tabulated from legal records but accurate demographic data and investigations of how social conditions and sexual practices are affecting married life: How do delayed marriages relate to and influence

extramarital activity? What is the impact of commercial sex on marriage and divorce? What is the relationship between family planning in its various forms and marriage stability?

- Prostitution as a practice that has many dimensions and implications for socioeconomic conditions, values, and health, particularly for STD and HIV transmission. Accurate basic demographic data are needed: numbers, gender, age, sex acts, income, customers (gender, age, nationality). To assist the prostitutes and to identify causes and thus develop preventive measures, one needs to ask questions that characterize personality, motivation, psychologic and physiologic consequences of their occupation, reintegration into society. Sociocultural dimensions of prostitution also need to be studied as well as legal controls and their effect on STD reduction or prevention.
- Woman status and roles in family and sexual relations.
- Homosexual and bisexual behaviours particularly description and explanation in the socio-economic, political and cultural context.

With these data, people in the region can mount public information campaigns about AIDS and HIV infection on the assumption that, eventually, education at all levels is the key to stopping AIDS. The materials used in campaigns should be shared widely and carefully evaluated for their potential in the various cultures.

Research training and dissemination of information among public health personnel (including government policy agencies) would foster appropriate measures in public health. Training for health officials should deal with confidentiality, provisions for STD and HIV testing and reporting, antidiscrimination protection and counselling programs for people who have been infected by HIV.

The design and methods of research deserve greater attention than they received in the past so that the region can develop a reliable body of knowledge on which sound action programs can be formulated. This is particularly true for research on values, beliefs, and practices carried out by behavioural scientists such as sociologists, social psychologists, social workers, counsellors, etc. Terms such as dating, courting, premarital sex, virginity must be avoided in questionnaires and surveys or they must be clearly defined for the sample populations and for the published reports.

Researchers of human sexuality, especially nonmedical professionals, face questions of ethical and social propriety and need information on approaches that work – guidelines that fit the sociocultural context of Pattern III countries.

By sharing protocols that work and are ethically, socially acceptable, researchers can inform sex education and counselling programs both within the formal and the nonformal sector. Little is known about how to design effective education projects, about content, methods for implementation, evaluation, and monitoring, or about specifying target populations and agents of implementation. Traditional agents have been teachers and parents, but religious organizations, health and social workers, the media, peers all have roles to play. The focus should be to develop better sex education materials, revising textbooks at all levels to include the latest research on STDs and AIDS.

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Table 1. Age of Women at Marriage in 14 Countries of Asia and the Pacific During the Early 1970s and 1980s as Reported by Smith (1980) and the United Nations (1988).

	Women's Age at Marriage (Year in Which Data Were Collected)	
Pakistan	19.2 (1971)	19.8 (1981)
India	17.1 (1971)	18.7 (1981)
Sri Lanka	24.1 (1971)	24.4 (1981)
Nepal	16.6 (1971)	17.9 (1981)
Bangladesh	15.9 (1974)	16.7 (1981)
Thailand	22.0 (1970)	22.7 (1980)
Malaysia (Peninsular)	22.2 (1970)	23.5 (1980)
Singapore	24.4 (1970)	26.2 (1980)
Indonesia	19.0 (1971)	20.2 (1980)
Philippines	22.2 (1970)	22.4 (1980)
Taiwan	23.3 (1975)	-
Hong Kong	23.8 (1971)	25.3 (1981)
South Korea	23.7 (1975)	24.1 (1980)
Japan	24.3 (1975)	25.1 (1980)

Table 2. Numbers and Crude Rate of Divorce in Seven Countries of Asia in the Mid-1980s.

Country (Year of Data Collection)	Divorce Number	Divorce Rates
Hong Kong (1984)	3,335	0.62
Indonesia	175,630	1.10
Japan (1985)	166,640	1.38
South Korea (1984)	25,858	0.64
Singapore (1985)	2,048	0.80
Sri Lanka (1985)	2,344	0.15
Thailand (1985)	30,057	0.58

Table 3. Percentage of Drug Addicts, Male and Female Prostitutes Engaging in Oral and Anal Sex.

	Anal Sex (%)		Oral Sex (%)	
	Yes	No	Yes	No
Drug Addicts	9	91	20	80
Male Homosexual Prostitutes	70	30	70	30
Female Prostitutes	18	82	25	75

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