

## CHAPTER TWO

# The Method: Men, Diaries and other Techniques

MISS PRISM: You must put away your diary, Cecily. I really don't see why you should keep a diary at all.

CECILY: I keep a diary in order to enter the wonderful secrets of my life. If I didn't write them down, I should probably forget all about them.

Oscar Wilde (1895) *The Importance of Being Earnest, Act II*

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### Prologue: Methodology in Aids research

Otis Dudley Duncan -- himself no mean methodologist -- warns his readers:

A man<sup>1</sup> writing on methodology is in the same position as one who plays slide trombone; unless he is good at it, the results are more likely to interest him than his audience

Duncan 1966, p95-96

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<sup>1</sup> the quotation pre-dates current concerns for non-sexist language.

That is a strong but justified warning, not least because this is being written by someone with an emeritus chair in sociological methods! In may therefore occasion some surprise that the methodological detail of the book has been minimized in the interests of wider readability. But however "spinach-like" (to quote another of Duncan's analogies), a methodological account is necessary if the techniques by which the information was obtained are to be reasonably assessed. In part this is because the use of systematic diary procedures are a fairly new development in studying sexual behaviour, and also because communication flow between American (U.S.) and British behavioural scientists working in the area of behavioural Aids research is so one-sided, as witnessed by comments from eminent American Aids methodologists such as :<sup>2</sup>

Diary approaches have not been used in any large scale AIDS-related behaviour surveys that we are aware of (p151)  
and

Though diaries may provide more precision than other methods, to date, diaries have not been reported to have been used in AIDS behavioral studies (p154)  
(Catania 1993)

So this chapter describes first the sampling design used to obtain subjects and then goes on to describe the Method of Sexual Diaries, and finally describes other methods used to obtain the data analysed in this book. The methodology of the main SIGMA panel study is reported in Davies et al (1993, pp61-81).

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<sup>2</sup> Probably the most influential and important U.S. publication on Aids Behavioural Methodology is Ostrow and Kessler (1993). In the Introduction and ten contributed chapters there occur only 12 references to British work or researchers (6 of these are to the biologist Sir Roy Anderson), and six chapters have no reference to British work or workers. By contrast, the corresponding British collection (Boulton 1994) has almost two-thirds of its references to U.S. scholars and researchers ... U.S. scholars are good, but not that good.

## 2.1 Sampling subjects

The logic behind the Project sampling strategy (from which the SIGMA data-set members are drawn) is complex, but hangs on three considerations:

- issues of intensive definition (what is the population to which we are trying to generalise? (e.g. are we attempting to sample "male homosexuals"? "men who have sex with men"?)
- issues of extensive definition ( is it possible, at least in principle, the list the population we are referring to?)
- issues of practicability (even if technically feasible, is it financially and practically feasible to obtain a sample?).

The answers we have argued for are as follows: (Davies 1986; Davies et al 1993 (pp66-71), Coxon (1995b))

### (1) Intensive Definition

*since the study is related to HIV transmission by sexual (and possibly other) means among males, there is no need to invoke notions of self-definition as "homosexual", or anything else.*

Put crudely, infection is liable to occur independently of what sexual orientation a man<sup>3</sup> thinks he has and it is important to combat the notion, commonly held, of think of "homosexuality" as an immutable and recognisable attribute was not to be encouraged. Kinsey (1948;650-657) illustrates well how prevalence estimates of "homosexual men" can be made to range from 4 percent to almost 50 percent by successively relaxing the criteria of the type of sexual contact and the time-period of sexual involvement with those of the same sex (Coxon 1988b). This is not to say, of course, that self-definitions

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<sup>3</sup> since the SIGMA study was restricted entirely to males, male terminology is used descriptively throughout the book. Where the reference is to a wider group, care is taken to vary the male pronoun.

or sexual orientation do not influence risk behaviour -- in fact they do). But it is "sexually active men who have sex with men" who form the notional population.

## **(2) Extensive Definition**

*No extensive definition of such a population is possible (since one would have to know about the man's sexual practices before deciding his eligibility, and issues of lying and "masking" would introduce enormous biasing factors)*

One has to be careful about this point; it is theoretically possible to establish a population sampling frame and, having enquired about sexual practices, then use this as a basis for selecting a sub-sample of men who have sex with men (MSM), and indeed recent national surveys (Johnson, Wadsworth et al 1994 in the U.K.; Laumann, Gagnon et al 1994 in the U.S.A) have attempted precisely this. Considerable doubts remain about identification and estimates of the prevalence of "homosexual men" by this means since there are good reasons to suppose that estimates are severely biased downward,<sup>4</sup> though equally Kinsey's estimates are almost certainly biased upwards. In any event, no general population survey of sexual behaviour was then envisaged in the UK and the cost of attempting to sample randomly on a two-stage basis (initially "combing" to produce a population frame, and secondly sampling within it ) was well outside our funding agencies' costings. Moreover, after Mrs Thatcher's notorious intervention to prevent governmental funding of the main stage of such an investigation and consequent funding from private sources (the Wellcome Foundation) has meant that the data are not accessible to other researchers.

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<sup>4</sup> From asking SIGMA panel members before the U.K. national study we know that a high fraction of gay men would not agree to be interviewed in the U.K. National Survey (though if they did, they would largely tell the truth), so real refusal rates of 31% are likely to contain a high number of male homosexuals. Truth-telling in the interview is also questionable, and rates of those admitting to homosexual activity are affected by factors such as the presence of others in the interview. The male homosexual incidence rates reported (Johnson and Wadsworth 1994, pp188-19) vary between 6% (any homosexual contact) and 1% (genital contact in the last year) are consequently probably considerable under-estimates.

### 2.1.1 The SIGMA typology

For these reasons, a different approach was attempted: to construct a design which would use the factors known to affect most the variations in homosexual men's sexual behaviour (Age and Relationship-type) and to use a sampling technique (chain-link or "snowball sampling") to access respondents. In their classic study Bell and Weinberg (1978, pp 129-139) had shown that gay men's relationships could be typified as: Close-couples, Open-coupled, Functional, Dysfunctional and Asexual and that this had a major influence on a whole spectrum of sexual behaviour and lifestyle issues. (The last three types had more to do with sexual and other problems in relationships, and were supplanted by "No regular relationship"). At a later stage this categorisation was made finer and became :

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Closed/Monogamous/Exclusive	1	
More than 1 regular partner	2a	
1 regular partner and casual/s	2b	
More than 1 regular partner and casual/s		2c
No regular sexual partner	3	

Notes:

- (1) The subject is assumed to have only one exclusive partner, whether or not they live together.
  - (2a) The subject is assumed to have more than one regular sexual partner but no casual partner/s.
  - (2b) The subject is assumed to have only one regular sexual partner, and other casual partner/s.
  - (2c) The subject is assumed to have more than one regular sexual partner, and other casual partner/s.
  - (3) The subject has no regular partner although he casual partners.
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In England and Wales ( Scotland has a different legal system) the Age variable also acted as a surrogate for English legal history. The youngest Age Group consists of those whose sexual activity is illegal (in England and Wales), being under the age of homosexual consent of 21, and the oldest group consists of those who have grown to

sexual maturity in the period before the Sexual Offences Act of 1967 when all homosexual activity (and hence, *a fortiori*, male sexual relationships) were illegal.<sup>5</sup>

To define the typology, the three categories of Sexual Relationship type (Closed ('monogamous'), Open (At least one regular partner and others) or No regular partner) are crossed with the variable of Age (categorised as Under 21, 21 to 39, and Over 39). These nine SIGMA relationship types are then labelled using the roman numerals I through to IX:

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<sup>5</sup> In retrospect it would have been better to have divided the large middle age-category and make allowance for the changed age of homosexual consent to 18, making: Under 18; 18-25; 25 to 39; over 39 as the categories.

Table 1.1 SIGMA Typology Table

<b>Age :</b>	<b>Under 21</b>	<b>21-39</b>	<b>Over 39</b>
<b>Relationship Type:</b>			
<b>Closed ('monogamous')</b>	<b>I</b>	<b>II</b>	<b>III</b>
<b>Open ('One regular and other partners')</b>	<b>IV</b>	<b>V</b>	<b>VI</b>
<b>No Regular Partner</b>	<b>VII</b>	<b>VIII</b>	<b>IX</b>

It is important to stress that the respondent's identification of his Relationship-type was taken as given. In some cases this would not be the same as his partner's (in particular, a relationship defined as "Closed" or exclusive by one partner might be defined as "Open" by the other).

Finally,

- (3) Probability sampling or recruiting procedures for such a population were treated as impossible<sup>6</sup>, or practically infeasible, and a chain-link ("snowballing") strategy was adopted.

### 2.1.2 Recruiting the sample

The first image that we worked with is that of an iceberg: MSM form a group of unknown size and composition, but can be thought of in terms of a "floating" fraction -- the tip of the iceberg -- who are "out", informed gay men (and are also usually more middle-class, better educated -- the typical characteristics of volunteer respondents (Rosnow and Rosenthal 1975), who are the easiest and therefore the cheapest financially to contact and persuade to agree to be investigated. They make up the bulk of most studies of gay men. But there is also a submerged fraction, of considerable but unknown size who in various degrees are closetted, unreconciled to their sexual behaviour, possibly leading an apparently heterosexual lifestyle or are very "hidden". These are difficult (and hence expensive) to contact and hard to recruit and feature rarely in studies of gay men. The need for a "representative" (let alone a probability) sample is to "burrow down" into the submerged fraction.

Now the image changes. The crucial thing that makes a population of MSM is that they are not isolates, but interact with other men even if only for sexual purposes. Because of this, MSM form not only a category but a network<sup>7</sup>, which in graph theory terminology is "connected" -- in principle, you can trace a chain of sexual contact from any one to any one other. The sampling procedure which have been developed in recent years for rare, hidden or elusive populations of groups such as MSM or drug-

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<sup>6</sup> see Kalton (1993) and Harry 1990 for good discussions of the feasibility of probability sampling of male homosexuals.

<sup>7</sup> "the world is composed of networks not groups" Wellman 1988, p37)



takers is the "snowball" (or chain-referral or link-tracing) sampling (Goodman 1961, Biernacki and Wald 1981, Spreen 1992). The technique is used to identify some starting set of members of the rare, hidden or hard-to-reach population, ask them to nominate or identify others, who in turn are asked to identify others, and so on. If continued long enough this diffusion process will encompass the whole relevant population (or, at least, connected sub-components of it), but because of the fact that the number of contacts a person has is itself variable, it cannot be considered a probabilistic form of sampling.

This tracing procedure was implemented in the Cardiff sample by the "nobbling" procedure( Rees 1988). What is interesting is that even in large nation-state human populations it does not take more than about seven such links on average to reach any person from any other -- the so-called "small-world" phenomenon (Milgram 1967, Pool and Kochen 1978).

This technique has been used in fields well outside this one, and especially in studies of drug-taking (Kaplan, Korf, Sterk 1987), and drug-prescription (Coleman et al 1966) and accessing minority or deviant groups. An interesting one is the brain-cell network, which is huge, but which has enough in common with human networks to be interesting (Rapoport and Horvath 1961) and it promised by its "tracing technique" to be directly applicable to our problems. Implementing one (or several) tracings of chain-links provides an excellent methodological specification of what sampling a hidden population should be. If continued to completion (and without error) such tracings would provide an enumeration (of at least connected subsets) of the homosexual population and also information about its local network characteristics. This is, of course, an ideal and is practically unrealistic as a technique *in toto*. Nonetheless, it tells us what form "snowball sampling" should take. The process used in SIGMA was two-stage: first to obtain easily-accessible respondents in each of the nine Project Design typology cells (chiefly from gay pubs, clubs and voluntary organizations). Secondly to use these initial contacts as starting samples for producing tracing trees. In practice the interviewer

asked the initial respondents to name other potential respondents who were of the same (Project) type as themselves, but preferably less "out" as gay. It was left to the interviewer to satisfy him/herself that this definition was understood by the respondent, and we were rarely able to ascertain whether this had actually been done.

The attempt by SIGMA to implement tracing sampling was noble, but ultimately deficient, and for a number of instructive reasons:

- often a given gay man's friends and acquaintances are not of the same Age-Relationship type as himself so that it was frequently quite difficult for a respondent to name someone of the same type, let alone someone that was less "out"
- the number of contacts to be named was never specified; more relevantly, there was no criterion provided by which the respondent could decide when the number of his nominees was sufficient.
- as a Project we had bound ourselves to anonymity in the form of not recording or making use of the name of anyone named in the research context. We therefore had to rely upon the respondent to contact his nominee and ask him to participate in the Project. Consequently we might never know that a specific person had been thus nominated, let alone whose nominee he was<sup>8</sup>

However, In terms of the stated objectives -- to "snowball" into the more covert gay population -- there was some degree of success. The first Question Schedule contained a number of questions asking who knew that the respondent was gay/bisexual. Inter alia this provided a useful indicator of "outness", and (at least in the South Wales site) this index of "outness" decreased as known contacts were interviewed.

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<sup>8</sup> at a later stage we decided that the anonymity undertaking might be a case of shooting ourselves in the methodological foot (see the discussion in Coxon 1993), but there were (and are) excellent reasons why gay men need to be persuaded that such information is safe and cannot be used against them.

## Assessment

But it must be said that the exercise was not a resounding success, and that the initial SIGMA sample was by no means a full "snowball" than other such studies. The reasons cited above are enough to account for its lack of success, but in principle each could be remedied especially if actual naming of contacts occurs. But the main shortcoming was that the criterion/relation for respondent naming was not only too vague, it was also not related directly enough to the sexual transmission method we were studying. This raises the question of whether a genuine (sexual) tracing sampling technique could have been devised and implemented, and whether it would have been more relevant<sup>9</sup>.

The gay scene in Cardiff and area is a good deal more closely-knit (on any significant criterion) than that of the sister site of London. Where it was possible to track the contacting process in Cardiff, it turned out that for sexual contacts (of whatever variety) there turned out to be a goodly number of cross-cutting circles, but with weak links between them, so that an estimate of ultimate connectivity probably depend rather importantly on whether the sample includes the liaison persons (bridges) that mediate such clusters. It would also lead to missing certain important subsets of respondents who come in and out of the scene on an occasional basis and who would only normally be contacted via one man; occasional (but not hardened) users of "cottages" are an important example of this.

This assessments of the topology of the homosexual network is largely impressionistic, and would need to be investigated directly as hypotheses. In neither main site, however, did we normally exceed a chain-length (let alone a tracing step-length) of more than 3, and we argued that a length of four would be necessary to achieve even

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<sup>9</sup> it was proposed in the original submission to the MRC (see Coxon 1986 §5.3) but was excluded from funding.

reasonable coverage and more than that would be necessary to come anywhere near encompassing a coherent cluster (Davies 1986).

In the event, then, the correct description of our "sample" would be that it was a 2-factor design quota sample that used multiple site, time and place sampling and snowballing techniques to access respondents. It was planned before the National Sex Survey and it had been hoped that it would be possible to calibrate our structure against their findings and weight appropriately. In the event this has not been possible. There is also a sense in which the subject sampling design of SIGMA "just grewed", like Topsy and several decisions had to be made under the pressure of events rather than in accord with the best canons of sampling. Kalton's comment (1993, p75) that "the sample design for a population group at high risk of HIV infection is likely to require an imaginative use of a combination of sampling techniques" is certainly true and although the SIGMA design included quota sampling, chain-link sampling, time and place sampling of gay clubs etc there was no truly probabilistic stratification and multistage sampling component, and if the study were repeated this is what would need most attention, but the cost would be daunting.

## **2.2 Sexual Diaries**

The diary is a chronicle we are all familiar with, even if only as much in its early abandoning as in its keeping. It is extensively used as a form of autobiographical memory and (following on from the quotation at the head of the chapter), as Miss Prism goes on to advise Cecily, "Memory ... is the diary that we all carry about with us". As a resource for qualitative data for social scientists and historians alike the diary is invaluable; it is a potent "Document of Life" as Ken Plummer (1983) describes it.

Most useful for research purposes are diaries which are kept for specific intentions or refer to particular domains and do so in a systematic manner -- travel, household purchases, health are obvious areas, as is sex. Sexual diaries have been kept quite naturally by all sorts of people and for all sorts of reasons: as a record of prowess, as an information-source in case of infection, as a therapeutic tool. But for whatever reason, gay men have been especially prone to keep such diaries, or to commit to their autobiography the detail of sexual happenings which are diary-like in content and form -- perhaps because if society defines gay men by reference to their sexual activity a diary of that sort re-affirms their identity on a daily basis. The sexual diaries of Joe Orton are notorious, but typical of the genre. His editor cites a well-known instance of an encounter with an Irishman shortly after the funeral of his mother:

*Friday, 30 December 1966, Leicester.* It was an empty house ... he didn't live there. He rented it for sex ... The bed had springs which creaked. First time I've experienced that. He sucked my cock. Afterwards I fucked him. It was difficult to get in. He had a very tight arse. A Catholic upbringing, I expect. He wanted to fuck me when I'd finished. It seemed unfair to refuse after I'd fucked him. So I let him. We lay in bed and talked for a while ... (Lahr 1986, p45)

In the course of the SIGMA researches I have come across several instances of men who have kept such a diary for decades (often over the entire sexually active life), but few survive the ravages of hostile families and new one-to-one committed relationships.

Sexual diaries are actually one step removed from the fully discursive, multi-focused, open-ended "stream-of-consciousness" diary. Sexual diaries are not only specific in focus, but are also systematic in form, relating common information about an encounter as if a set of questions were being asked about the behaviour in question (Who? Where? When? What?) and commenting on it. In that, they resemble more closely the time-budget studies, media-watching records and "crime-diaries" used by other social researchers ( Belson 1986) -- and usually in the fact that they are being solicited or paid for by the researcher. In the case of the SIGMA sexual diaries, several of us had

kept diaries of this sort for a number of years before the study began, and our construction and systematization of the diary method grew out of our experience as sexually-active gay men, and thus allowed us to tap in immediately to the vocabulary and to the set of distinctions used in everyday discourse among gay men.

Sexual diaries may exist as a social practice and as a resource, but why develop them as a specific method? Basically because of the shortcomings of conventional methods of research when applied to sexual behaviour.

If we were interested primarily in the actual mechanisms of sexual transmission of HIV, then direct observation might well be the appropriate method for obtaining information, as in the Masters and Johnson [1966] study. But such a method is likely to lead to highly biased estimates, since only a highly atypical sub-population is likely to consent, and the presence of an observer would itself be highly reactive. Direct systematic observation as a method is therefore far from unobtrusive and would involve massive problems of consent and organization (and cost). It would in any case be illegal, at least in England and Wales (if not in Scotland)<sup>10</sup> for homosexual activity.

So to obtain relevant information, we normally rely on subjects' own reports or accounts of sexual activity have to be obtained, and the interview setting provides the most usual context of data-collection. In Project SIGMA the yearly Core Question Schedule includes as a central element the "Inventory of Sexual Behaviour" (ISB) (Coxon 1992b), asking respondents a systematic set of questions about whether (and if so, how often) they had engaged in these detailed activities ever (for prevalence) and within a given period of time (for incidence). But how accurate are such subjects' estimates likely to be? From the outset of our enquiries the data gave good grounds for scepticism: the

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<sup>10</sup> the presence of a third person (here the social scientist) would render homosexual activity illegal under the 1967 Sexual Offences Act as being no longer a "private" activity. Scottish law does not contain this restriction.

numbers given in answers were often suspiciously vague, rounded or approximate (Coxon 1988b), suggesting problems of accurate memory recall. Moreover, when questions (identical or implied) were repeated later in the interview, the number given was rarely the same, suggesting problems of reliability. When cross-checks were made with estimates given by their partners the numbers were (to varying degrees) often at variance with the respondent's, suggesting problems of validity.

Much information obtained about sexual activity in the interview context is also atomistic and out of context -- we learn whether or how often something was done, but rarely the context in which it took place, the sequence in which it occurred or the person with whom it occurred. But as we shall see, such factors make a big difference to the meaning of sexual behaviour, and they are also important in attempting to understand sexual risk. That sexually risky behaviour takes place is important, but if people are to be encouraged to lessen or avoid risk then we need to know the significance of such behaviour to the person, and we also need to identify its context in order to find out whether risk-taking varies systematically by situation, rather than simply by individual. Again, the number of sexual partners a person has is an important variable epidemiologically, but it is even more important to know whether they are one-off or regular partners, whether sex with such partners involves penetrative or unprotected (risky) sex, whether alcohol or drugs such as alcohol or poppers have been used (possibly as disinhibitors) ... and so on. In the interview context such questions are asked separately, and even if recall is excellent we can know nothing about how they co-occur with sexual behaviour and combine in a particular sexual situation to increase or decrease risk. Finally, the order in which sexual activity occurs (and the position in a sequence in which an act occurs) can have quite different effects. An example is the differing risks of hepatitis infection when sucking follows fucking as opposed to preceding it. Similarly, the probabilities of transmission are very different according to whether a person is anally receptive or insertive, and we knew little indeed about the prevalence and possible mixture of sexual role playing in male-with-male sex.

The interaction of these issues is highly complex, and adequate answers to them cannot be obtained by simple questionnaire methods. But they are pressing issues, whose answers could have radically different consequences for understanding and predicting the spread of Aids and for health education and interventions. It is not just that recalling complex behaviour is more difficult than recalling simple behaviour but that many people are unaware of how these factors combine in their own case, or simply cannot give a verbal account of it. A rather different method is therefore called for which can provide information in a manageable and a systematic way: we developed the Diary method for this purpose. What are its advantages and disadvantages over other methods<sup>11</sup>?

### **Advantages of the sexual diary method**

The sexual diary method:

- is a more "natural" method than most other methods, both in the sense that it exists as a common social practice and that it is written in natural language.
- makes it possible to obtain information in far greater detail than other methods, since it is designed to minimise recall and memory errors and cognitive strain
- is especially adapted to gathering reliable information on the time-sequence of events, so that change is more easily charted.
- The information can be obtained in a contextually-specific manner, without relying on recall; thus variation due to (e.g.) particular sorts of partners or particular settings can be directly studied
- Quantitative information is derived directly from the data, without recourse to the error-full estimating procedures used by survey questioning or respondent recall.

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<sup>11</sup> this section relies on Coxon 1994



- The sexual diary can be augmented to obtain other concurrent information such as alcohol and drug use in sex (see Weatherburn et al 1993), and
- the data obtained are (on present evidence) more reliable and valid than those obtained from retrospective recall in surveys (see Janson 1990).

These advantages are impressive, but need to be balanced against the undoubted disadvantages, some of which can be ameliorated.

### **Disadvantages of the sexual diary method**

The main disadvantages of the sexual diary method have to do with bias in recruitment of respondents rather than with the method of data collection per se. But:

- there is undoubted selection bias with respect to those who do and those who do not agree to be diary respondents or return information. In the case of hidden populations like gay men selection bias in the recruitment of those prepared to keep a diary exists in addition to that in the initial sampling procedure of Project sample members. The sources of bias are very similar to those in other studies relying on volunteer subjects (Rosenthal and Rosnow 1975,p225): Educated, higher social class, intelligent, approval-motivated and sociable; (the last characteristic here takes the form of being more likely to be "out" as gay men).
- Those volunteering tend to be more sexually active (in the sense of having more sexual sessions and more partners) than those who do not volunteer<sup>12</sup>
- For longitudinal studies there is undoubted "step-wise attrition" -- it is far easier to persuade men to keep a diary for consecutive months than regularly on a yearly basis.
- The type of data generated cannot readily be analysed by conventional packages, and rely on an intermediate stage of string-manipulation software

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<sup>12</sup> we have been able to show that it is selection bias toward those with busier sex lives rather than exaggeration of activity that is primarily producing bias.

## 2.2.1 The structure of sexual action

The Sexual Diary Method, like the questions on sexual behaviour in the Core section of the SIGMA Interview Schedule (SIGMA 1995), is based upon a common schema of sexual behaviour, originally developed to apply to homosexual behaviour, but readily extendable to other orientations.<sup>13</sup> It is important to understand the schema before explaining the diary method further. A diagrammatic version of the schema is presented in Figure 2.1

Figure 2.1 about here

The unit of sexual behaviour is the **Sexual Session**, denoted by the outer square box in Figure 2.1. Using a linguistic analogy, which we shall later exploit more literally, the sexual session may be considered as the "sentence" of sexual activity -- self-sufficient and intrinsically well-formed.

The sexual session occurs at a given (specified) time and place and is made up of one or more **sexual acts** (in the rounded rectangle). Each Sexual Session involves at least one, usually two (and sometimes more) people. It is typically ended terminated by sleep, a non-sexual intermission or change of partner. The characteristics of a Sexual Session thus include four components: the Setting that contextualises the sexual act, the Antecedents, the Accompaniments, and the Partner Specification.

-- The Setting refers primarily to where and when the sexual activity took place. "When" is usually the time of day, so that sexual sessions can be kept in time order, and the "Where" usually refers to the location (such as "boyfriend's flat" or "my home", or outside locations such as "Public toilet at X", or "Park Y").

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<sup>13</sup> The schema is reported in several places, but the most extensive account is in Coxon et al 1992, on which this section is based. The applicability of the schema and of the diary method reported here is currently being investigated on bisexual, heterosexual and lesbian subjects.

-- The Antecedents refer to any relevant events which preceded or led up to the sex, such as prefatory drinks or drugs, use of poppers (nitrites) or stimuli such as videos or magazines.

-- The Accompaniments refer to antecedents which continued during the sexual activity, together with the use of additional objects during the sexual activity, such as lubricants and "toys" (e.g. dildoes, nipple clamps, leather).

The Partner Specification would ideally consist of both the name and characteristics of the partner/s, such as age, sex, relationship status<sup>14</sup> However it is often necessary to remove the actual name of a partner from the record when undertakings of anonymity or confidentiality have been given, but in so doing all record linkage (for network or contact analysis) is then forgone<sup>15</sup>.

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The core component in describing sexual activity, the "atom" of sexual behaviour, is what actually happens -- in our terminology, the "sexual act".

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<sup>14</sup>The characteristics requested depend on the purpose of the analysis. In some cases it is feasible to ask the identity, or at least the initials, of the partner. Where this is not feasible (or because an undertaking of strict anonymity has been given, as in earlier stages of Project SIGMA) each partner is assigned a unique (arbitrary, but sequential) number. Partners are described in terms of Gender (male, female), Partner Status [Regular, Occasional, Casual, One-off], Age, How long the subject has been having sex with the partner, Where the partner was met on this occasion, HIV antibody status (if known), and Initials or name (see Appendix 2.3(§ii)).

<sup>15</sup> Respondents are informed that initials are useful to ensure that the same partner can be identified across different month-diaries and also to help link data when possible. An experiment by the author and Dr Chris Joyce of CSCD Colindale in inferring identity by "blind" matching of partners using profile-matching and genetic algorithm techniques is reported in Coxon 1995b

### 2.2.1.1 The Sexual Act: behaviour, modality and outcome

On the linguistic analogy, the sexual act is the word in the sentence, and sexual act(s) make up the sexual session. It is the sexual act which specifies "WHO does WHAT and with what EFFECT". These three components of the sexual act are referred to as :

- the Behaviour (or behaviours) which refers to the actual sexual activity itself ("what" is done)
- the Modality which refers to "who [does the activity], and to whom"), and
- the Outcome which refers to the "effect" of this sexual activity, which in the context of HIV transmission becomes the question of whether ejaculation of sperm occurs, and if so, who ejaculates, and in what manner.

Let us specify each of these in turn.

#### **Behaviours**

A succession of what are actually continuous bodily movements are, or can be, "chunked" into identifiable and (well-nigh) universally recognizable sexual activity and given a common name. For instance, whilst the act of masturbation will usually have at least some unique components (for no-one does it exactly the same way, and no-one repeats the act identically), the stimulation of the penis by the hand is usually taken to be a necessary part of the definition. As in so many other aspects of sexual behaviour, even such a behaviourist as Kinsey insists that it also has an intentional aspect<sup>16</sup>; so that random, unintended, rubbing of the penis would be thus excluded from the category of "masturbation". Despite its virtual the fact that virtually every man has done it and that it is done from an early age, the nomenclature is far from universal. Because the act of masturbation is often taboo especially among children, and frequently discouraged or prevented, it comes to be referred to by all sorts of euphemisms and

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<sup>16</sup> "the word 'masturbation' refers to any self-stimulation which is deliberate and designed [sic] to effect erotic arousal. By such a definition the accidental touching of oneself is not masturbation because it is not deliberate" (see Kinsey 1948, pp 497 - 498)

code-names (often unique to the family concerned). There thus arises a hierarchy of terms of differing acceptability, from the medical terminology used professionally (and often when talking to professionals) through a widely-used set of vernacular terms to largely idiosyncratic ones. In Project SIGMA, the WHO studies and in related studies we have always elicited such terminology before proceeding to questioning on detail of sexual behaviour (see Appendix 2.6). The purpose of this is not only to gather information on "street" terminology, but also to make the respondent more at ease in asking detailed information about what may be an embarrassing topic. For this reason, all our research forms including the Inventory of Sexual Behaviour are constructed with the neutral (medical) term in curly brackets, and the subject's chosen alternative is substituted in the spoken form. Thus:

*"Have you ever {masturbated} another man to his {ejaculation}?"*

will be rendered in the interview as:

*'Have you ever "wanked" a guy until he "came"?'*

if those are the subject's preferred terms, or indeed as:

*'Have you ever "given a hand-job to" a guy until he "spunked"?'*

in another case.

The set of sexual behaviours must be open-ended. Although the number of distinct and distinguishable sexual activities is immense, the distribution of types of sexual behaviours is very skewed and a surprisingly small handful of behaviours (typically three) normally suffices to encompass over 95% of sexual behaviours. (see §4.2.1).

It is not usually difficult to specify the list of the more common or well-established sex behaviours such as wanking and sucking; it is the more recently developed and ill-defined ones which cause difficulty. Thus "Massage" can mean anything from rubbing hands over the body to systematic manipulation of muscles, and a practice like inter-femoral penile insertion ("thigh-fucking"), which tends to substitute for anal intercourse in a post-Aids era, can cover a wide range of actual practices.

In the case of project SIGMA and the WHO Homosexual Response Studies, the list of sexual behaviours is given in Appendix 2.1 is used. (Gay men's sexual behaviour is discussed in detail in Chapter Four).

### **Modality of the Sexual Act**

The modality of the sexual act -- the prefix to the sexual act "word" -- specifies which actor (from ego's standpoint) did what sexual act to which actor. A variety of contrast terms exist to distinguish these two roles: inserter/insertee, active/passive, as well as "street" language such as the "doer" (usually, inserter), butch/bitch etc. Although particularly relevant to anal and vaginal intercourse, the inserter/ee contrast cannot be used for all sexual behaviour since it carries with it a view of sexual activity as primarily insertive (and by implication, male). More importantly, the role-difference in some y behaviours -- such as wanking -- is not, and cannot reasonably be described as, that of inserter/ee. Therefore we adopt the "active/passive" distinction as basic, and use it in accord with conventional grammatical usage to denote verbal mood (hence "modality"), noting that this also conforms to common usage among gay men:

*"Active" means that EGO DOES the given sexual act TO ALTER*

*"Passive" means that the sexual act IS DONE TO EGO BY ALTER.*

Thus, "active masturbation" means that I masturbate the other person and "passive masturbation" means that the other person masturbates me.

Besides the basic Active/Passive modalities, we further distinguish:

*"Mutual" means that EGO DOES the sexual act TO ALTER at the same time as ALTER DOES the identical act to EGO.*

*"Self" means that EGO DOES the sexual act TO HIMSELF*

*"Him" means that ALTER DOES the sexual act TO HIMSELF.*

These modalities are discussed further in §5.1

## The Outcome of the Sexual Act: Ejaculation

The dominance of HIV transmission in our account naturally means that we concentrate primarily on ejaculation of sperm (sometimes this is inaccurately but euphemistically called "orgasm") as the primary "outcome" of the sexual act. Initially we concentrated simply on whether a subject ejaculated or did not as the result of a given sexual act. As time went on the advice of Safer Sex guidelines (and the inventiveness of some members of the gay community) meant that we had to pay more careful attention to exactly where the ejaculate went, and by the increasing need to know whether that destination was a condom. Thus condoms began as "accompaniments" in our schema<sup>17</sup> and finished as an integral part of the outcome.

After an initial attempt to work with a simpler description of ejaculation (see Coxon et al 1992, pp68-69) it became necessary to allow five possible outcomes for each of the partners: into a person, onto a person, into a condom, some other destination and no ejaculation. These are described and elaborated further in §5.3.

Before putting all these components together to lay out the structure of sexual behaviour, three further issues must be briefly discussed:

- the representation of complex sexual behaviours,
- the representation of their sequencing, and
- the description of the accompaniments of sexual activity.

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<sup>17</sup> indeed, condoms can still be used as accompaniments, as when they are used as a toy, or when they are used as a prophylactic before "pulling out". This allows us to distinguish using a condom when fucking (but not coming) from coming into a condom when fucking.

## Complex Sexual Acts and Sequencing

On occasion two (or sometimes more) sexual acts occur simultaneously and in a way that may have implications for HIV transmission. For instance, wanking is often combined with fucking, but in very different forms. In this case we introduce concatenation as an operator to combine two acts done simultaneously and symbolize it by the ampersand "&". Examples commonly include:

-- AF&HW

(Active Fuck & He Wank: i.e.Ego fucks Alter anally and at the same time Alter is wanking himself)

-- PS&ATt

(Passive Suck & Active Tit-torture: i.e.(Ego is being sucked and at the same time is tweaking Alter's nipples).

Such complex (concatenated, simultaneous) sexual acts are treated as a single act.

If a sexual session contains more than one sexual act, some conventions are necessary to denote the sequence in which they occur. This is done simply by linear sequencing, using a space as a separator between acts:

AW PW AS PS MW

reading in longhand as:

Active wank, then Passive wank, then Active suck, then Passive suck, then Mutual (simultaneous) wank.

## Antecedents and Accompaniments

The Antecedents and Accompaniments give information about the context or setting of the sexual behaviour which might have relevance for HIV transmission. Although it is useful to distinguish Antecedents and Accompaniments in this way it has a degree of artificiality since there will be some things which continue both before and throughout



a session, others which are used intermittently (e.g. "poppers" or bondage), and yet others which will refer only to a specific act (e.g. the use of a lubricant or dildo or a condom). Those which are of special relevance include:

<b>CLASS</b>	<b>EXAMPLES</b>	<b>Sexual Behaviour</b>
1. Drugs	Amyl/butyl nitrites Cannabis, Ecstasy etc Alcohol	especially fucking
2. Prophylactics	Finger stools Dental dams Veterinary gloves	fingering rimming fisting
3. Lubricants	Water based (e.g KY) Oil-based Vegetable-oil based Saliva, Semen	especially fucking
4. "Toys"	Restrictors ("cock-rings") "Pain-Pleasure" (belts, nipple-clamps, pendant weights Stimulators (dildoes)	

These are discussed further in §5.4.

### **2.2.3 Instruments and formats**

The Sexual Diary method has changed little since its development and inception in 1983. Although a retrospective one-week version was written into the SIGMA core questionnaire from the outset, the normal format consists of a month-long diary which is self-administered, and hence Instructions are needed which will be readily understood. The current Instructions are reproduced in Appendix 2.2.

The primary purposes of the Instructions are to alert the potential diarist to the characteristics of the sexual behaviour schema outlined earlier (see "What you should

record") and stress the importance of keeping as small a gap as possible between the events and their record ("Finally"). In the current form, the diarist is encouraged to write in natural (if telegraphic) language -- in the past they were encouraged to write in code, at least in part<sup>18</sup>.

The other components of the Diary Pack are reproduced in Appendix 2.3 and consist of (1) Face-sheet information (2) Partner List and (3) and example of a 1-week sheet of the Sexual Diary. As will be noted, diarists are encouraged to spread over as much space as they wish, and some dispense entirely with the formatted sheet and write their diary in free format.

### Example of a week diary

To give the feel of diary-data, an anonymised (but close-to-original) week of a sexual diary is reproduced in Figure 2.2

Figure 2.2 here.

This particular account is very factual and brief and the entries obey most of the guidelines. All ejaculations are unambiguous in terms of who ejaculated and whether it was protected, if not as to the exact destination of the ejaculate. Very little "taken-for-granted" pragmatic information is needed to interpret the diary entries, with the possible exception of "69", mutual/simultaneous sucking. But such simplicity is not always a feature. Consider the following (genuine) entry:

FRI	5pm @ P2's flat after meals and bottle of sherry between us both on poppers fucked each other and wanked each other after an hours break. 10pm I sucked him (P2) hard 'til he came in my mouth & I swallowed all his cum
-----	---

---

<sup>18</sup> this was before the introduction of the complexities of the "Chriscode" (see §5.3) for recording ejaculation, and it allowed the contents of the diary to be kept from prying eyes, usually of a partner, parent or landlady. But increasing complexity meant also increasing error, so self-encoding was no longer encouraged, with the single exception of "SWO", which in the older system meant "self-wank to orgasm". It also occurred on a Project t-shirt which said "Why SWO when you can be interviewed by Project SIGMA?"

In the 5pm session, the men "fuck each other" ; clearly they did not, nor could they, fuck simultaneously (as one naïve heterosexual coder assumed), so the fucking must have been sequential, but we have no clear indication of who fucked who first. Did either come? If so, when fucking or when wanking? It is not entirely clear, but pragmatic information about gay sex and contextual information about this man's typical practice would indicate that the "hours break" may have been to regain momentum after coming as a result of (active) fucking, and that they each came a second time as a result of the (simultaneous?) mutual wank. Indexicality can thus be as rife here as in any other social account.

### **2.2.3.1 Encoding and Representation**

And so we come to the more esoteric parts of sexual diary data: their representation and encoding.

The schema of sexual behaviour described above can be given a more formal logical representation, outlined in Appendix 2.4. Once well-defined, the components and structure of the schema are readily mapped onto the structure of the data-base record used to store diary information. Components of the schema and fields of the data-base record are in 1:1 correspondence:

SEXUAL BEHAVIOUR SCHEMA	DATA-BASE RECORD <sup>19</sup>
<b><u>Individual (ID)</u></b> (SIGMA Type, HIV status)	<b><u>Set of Records with common NO.</u></b> <i>DIARY_START</i> and <i>DIARY_END</i> <i>TYPE, STATUS</i>
<b><u>Session</u></b>	<b><u>Record</u></b>
<b><u>Context:</u></b> (Day, Date (Time, Place)	<b><u>Fields:</u></b> <i>DAY, DATE</i> <i>TIME, PLACE</i>
<b><u>Partner</u></b> (ID, Description)	<i>PARTNER</i>
<b><u>Sexual Act/s</u></b>	<i>ACT</i>
<b><u>Outcome Ant/Acc</u></b> (Condoms, Lubs.)	<i>CONDOMS, LUBS</i>
<b><u>Other Antec/Acc</u></b> (Drugs, Poppers, Other)	<i>DRUGS,POPPERS</i> <i>OTHER</i>

So the data-base representation acts as a filing system which mirrors the Schema structure and thus makes its encoding straightforward.

The idea of encoding sexual information has a long and distinguished history (McCormick 1980) , probably best known from Pepys' diaries, where his dalliances were recorded in a cipher intended to keep the contents from prying eyes<sup>20</sup>. Our purposes are largely more mundane --to facilitate retrieval and analysis of the data.

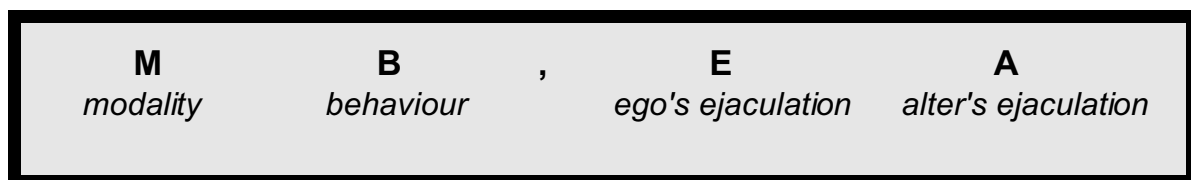
---

<sup>19</sup> the relevant data-base field is given in *ITALICISED CAPITALS*

<sup>20</sup> this is not entirely a fanciful notion; one of our diarists was summarily ejected from his lodgings when his landlady found the diary. Moreover, explicitly-written sexual diaries could well be construed as "pornography" when sent through the mail -- itself an illegal action in Britain -- and this was one reason for originally encouraging diarists to write entirely in code. Further instances are described in Coxon 1993b.

The core of the sexual schema is the sexual act, and it is here that the encoding is most specific; in other fields the entries can simply be extracted from the natural-language accounts. Here, too, the linguistic analogy for representing and understanding sexual action is most apposite. It is the succession of the acts which makes the sexual session, just as it is the succession of the words which make the sentence. The meaning of the sentence is conveyed both in the reference (and connotations) of the words and in their grammatical structure. The session is thus the basic building block of the diary, the "sentence" of the sexual narrative, and will always form one record in the database.

Each sexual act consists of a behaviour done by the actor/s in a specific way (modality) and possibly resulting in one or both ejaculating. Each act is therefore given the form:



Thus the "root" of the act is the behaviour, the modality is the pre-fix and the outcome/s are the suffix/es. When encoding a given act, each alternative is represented by a letter (though some behaviours are represented by two letters) which are chosen to be as close as possible to the natural language "street" term. These abbreviations are presented in Figure 2.3

Figure 2.3 about here

Using the form above, it is then simply a matter of substituting the relevant abbreviation. As an example, take the first session from the Figure 2.2:

The diarist's account reads:

♂ ||We deep kissed||, and moved into a "69". Whilst doing it I began to finger him||. Then he wanked me (both using poppers) and I came.|| Following that I wanked him till he came||.

There are four acts in this session (marked off by the || lines). Each is taken separately and put into the act-form:

---

(i)	we deep kissed	⇒	Mutual Deep-Kissing (no outcome)	⇒	<b>MDK</b>
(ii)	... "69" (and whilst doing it), I fingered him	⇒	Mutual Suck (no outcome)	⇒	<b>MS</b>
		⇒	Active Finger (no outcome)	⇒	<b>AFg</b>
					<b>&amp;</b>
(iii)	he wanked me and I came (both using poppers)	⇒	Passive Wank, Ego-came Alter did not ( destination elsewhere?)	⇒	<b>PW,XN</b>
					<b>/p</b>
(iv)	I wanked him till he came	⇒	Active Wank, Ego-not come Alter-came	⇒	<b>AW,NX</b>

---

So the entire session is encoded as:

**{ MDK MS&AFg PW,XN/p AW,NX }.**

The finer details of encoding sexual diary information and entering the data are contained in the Instructions for Encoding Sexual Diaries, which forms the Coders' Manual used by diary encoders<sup>21</sup>.

Each session is then entered as record in the database (currently using Cardbox-Plus™ and dBaseIV™ formats). An example, encoding the illustration of the first session in the One-week diary, is as follows:

---

<sup>21</sup> This booklet is available from Project SIGMA, University of Essex.

```

=====
NO:XXX | TYPE:IV | STATUS:NEG | DAY:SUN | DATE:03/05/92
-----
TIME:09:00 | PLACE: OWN FLAT
-----
PARTNER:P1
=====
ACT: MDK MS&AFg PW,XN/p AW,XN

-----
POPPERS:Y | CONDOMS:N | LUBS:N
-----
OTHER:

-----
DRUGS:N
-----
DIARY START:03/05/92 | DIARY END:31/05/92 | RECORD CODE:S
=====

```

### 2.2.3.2 Analysis of Diary Data

Once entered in the data-base any conventional selection, counting and logical retrieval can be done on the diary data. But at an early stage it was found necessary to produce special-purpose software for the analysis of the data, which are a curious amalgam of linguistic, verbal and quantitative information and call for a unique combination of methods and styles of analysis. The earliest programs were written by Mr Chris Mitchell (of the eponymous "Chriscode") and the suite were re-written, extended and systematised into a suite of C++ programs called SDA (Sexual Diary Analysis) by Mr N Huw Coxon, under Department of Health funding. The Program Suite is fully documented in Coxon and Coxon 1993.<sup>22</sup>

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<sup>22</sup> The program suite (and extensive test data) is available at cost from: Project SIGMA, University of Essex.

The programs usually work on BASIC (comma-delimited, double-quote enclosed ASCII) **.dmp** output files from data-base programs such as dBase and CARDBOX . The suite includes a set of utility programs for manipulating and screening the data (SIEVE), together with a range of analysis programs:



## **SDA Utility Programs: Summary Table:**

*(References in [square brackets] are to sections in this book where the program concerned was used for analysis and/or production of Tables and Figures).*

<b>Name</b>	<b>Summary Description</b>
<b>BAPN</b>	<i>Performs Role-segregation (BAPN) analysis on specified fileset and specified behaviours. [5.2]</i>
<b>COLLECT</b>	<i>Discovers mean session length in fileset, and produces a session length distribution [6.2]</i>
<b>CONDOM</b>	<i>Prints the percentage of sessions in which a condom was used within the specified fileset [5.4.2; 8.1.1]</i>
<b>COOCUR</b>	<i>Performs one of six possible co-occurrence analysis methods using a set of acts as specified in the directive file. Output is formatted in either NORMAL, HICLUS or KYST format for scaling analysis [6.3]</i>
<b>COUNTIND</b>	<i>Counts the number of individuals in the specified fileset .</i>
<b>CPSANAL</b>	<i>An interactive program for performing precedence, successor and co-occurrence analysis [6.3; 6.4]</i>
<b>DOCINDS</b>	<i>This program produces a file called INDDOC.TXT which contains all information about all individuals in the specified fileset.</i>
<b>EVER</b>	<i>Performs EVER analysis on all files in the specified fileset, but only on individuals of the specified SIGMA type. Type may be ALL meaning ALL individuals [4.2]</i>
<b>FDATE</b>	<i>Interactive program for attempting to recover date information in all files specified by fileset. It will format all dates in the files to DD/MM/YY format</i>
<b>FREQACT</b>	<i>Counts frequency of all behaviours by modality that occur in the specified fileset and have the specified SIGMA type. The type may be ALL to analyse all types [4.2; 5.1].</i>
<b>GETDIARY</b>	<i>Reads all data in the specified fileset and re-arranges it so that it is collected into month diaries.</i>
<b>GETFUCK</b>	<i>Collects all records/sessions from files specified in fileset that include at least one occurrence of anal - intercourse (in any modality) [4.2.1.3; 8.1].</i>
<b>INDSORT</b>	<i>Sorts all data specified by fileset into individual order. The sorted data is put in files separated by site, of no more than 500 records.</i>
<b>KWIC</b>	<i>KWIC performs KeyWord In Context analysis on sexual acts (the "word"). [8.4]</i>

<b>MARKER</b> <i>[fileset]</i>	<i>Performs MARKER analysis on files specified by fileset. MARKER analysis is concerned with the frequency of acts that begin and end sessions. [6.2]</i>
<b>RISK</b>	<i>Performs RISK analysis on all files in the specified fileset. RISK analysis looks at the relative frequency of outcome destinations for masturbation, fellatio, and anal-intercourse [5.3; 8.1]</i>
<b>SESSTYPE</b>	<i>Performs session type analysis on all files specified by fileset. Session analysis is concerned with the structure of sexual sessions with respect to the frequency of role or reciprocation expressed by diarists. [6.5]</i>
<b>INDFUCK</b>	<i>Counts number of sessions in which an individual engaged in a range of risk -related and other acts [8.3; 8.4]</i>
<b>LORENZ</b>	<i>Calculates cumulative distributions for Lorenz curve analysis and calculates Gini coefficient [4.3; 8.2]</i>

Output from these programs are readily be sent to statistical and other packages in rectangular or other suitable format. Program packages used in this volume to analyse the diary data include UNISTAT™4, SPSS™/pc, MDS(X), PC-MDS, OCP.

## 2.2.4 Data Sets

Data sets used in this and subsequent chapters span eight years of the Aids pandemic, from 1986 to 1995 and include both "one-off" diary surveys and diaries from the longitudinal SIGMA cohort.

### 1. GT86 (1986; N=188)

The "Gay Times" data set<sup>23</sup> originates from a feature article by the author entitled "Gay Sexual Lifestyles" in the May 1986 edition of Gay Times. The article announced the start of funding from the Medical Research Council for Project SIGMA, but I had been developing the diary method over a number of years (the first published diary data occur in Coxon 1986 and refer to a diary collected in 1984). 273 men responded to the Gay Times appeal to keep a sexual diary for a month; 188 diaries (69%) were received back. Compared to the general

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<sup>23</sup> this study is documented in Coxon 1986.

population of males, respondents over-represent the South-East and under-represent Scotland and the North-West. They were strongly over-representative of the 21-39 age group and strongly under-representative of the 40+ age-group. The Project Typology percentages for GT86 are:

RELATIONSHIP	AGE	UNDER 21	21 - 39	OVER 39
CLOSED	( I )	1.8%	( II ) 12.9%	( III ) 4.1%
OPEN	( IV )	2.3%	( V ) 20.5%	( VI ) 14.6%
NO REGULAR	( VII )	5.8%	( VIII ) 28.1%	( IX ) 9.9%

N=171 (17 n.c)

Note that numbers of those under 21 (then the age of homosexual consent) are especially small and that certain combinations of age and relationship-type are especially rare, and this reflects the fact that as gay men get older they tend to move into relationships, but the young (and sexually most active) have no special taste for them. There is a modest positive (but non-significant) relationship between Age and Relationship-type

## 2. SIGMA (1986 - 1993; N= 385)

Each year, after the interview, SIGMA panel members were asked to keep a sexual diary for a month. Their diaries form the base of the main SIGMA data set and represent Waves One to Five of data collection, and thus span 1986 to 1993. The 385 men came primarily from London and South Wales, with others from Newcastle, Tees-side, Birmingham, Portsmouth, Leeds, Norwich, Liverpool and Bristol. Relatively few respondents kept a diary in each wave, and therefore

only a fraction of these data are fully longitudinal<sup>24</sup>. This forms the largest single data-set of sexual diary data. The typology percentages are as follows:

RELATIONSHIP	AGE-		
	UNDER 21	21 - 39	OVER 39
CLOSED	( I ) 1.6%	( II ) 11.7%	( III ) 4.0%
OPEN	( IV ) 1.1%	( V ) 25.2%	( VI ) 18.6%
NO REGULAR	( VII ) 9.5%	( VIII ) 15.6%	( IX ) 12.7%

N = 377 (8 n.c.)

There is quite a strong similarity between GT86 and SIGMA in terms of the percentage distribution over the Age-by-Relationship table; given the totally different methods of recruitment, the similarity is striking.

### 3. GP93 (1992-93; N=79)

In November/ December 1992 an appeal for men to keep a month sexual diary was made in the gay press (hence GP data): Boyz, Pink Paper, Capital Gay (weeklies) and Gay Times (monthly). With the exception of Boyz, the response was disappointing. A total of 178 men wrote in for a diary and 86 returned a completed diary, of which 79 were usable: 60% from Boyz, 22% from Capital Gay and 17% from Gay Times. A significant fraction of these men were persuaded to keep a diary for one or more -- in a few cases, five -- subsequent months, so that longer-term stability of patterns of sexual behaviour could be investigated. The 1992/3 study was also a study of validity and reliability of the diary method. Having completed and returned a diary, respondents were then written to and asked to estimate the number of times they had done various sexual activities in the period of the diary, thus simulating a "questionnaire" or "interview" response which could be compared directly to the actual count of their activities from their diaries. The typology percentages for GP93 are:

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<sup>24</sup> 1% did a diary in all 5 waves; 6% in 4; 24% in 3; 62% in 2; 7% in 1 wave.

RELATIONSHIP	AGE	UNDER 21	21 - 39	OVER 39
CLOSED	( I )	6.3%	( II ) 6.3%	( III ) 2.5%
OPEN	( IV )	3.8%	( V ) 19.0%	( VI ) 6.3%
NO REGULAR	( VII )	5.1%	( VIII ) 30.4%	( IX ) 20.3%

N=79

This distribution is rather different to the previous two, though the same structure is clearly present. In particular, Open relationships are fewer and Casual (No regular) relationships have increased.

The original diarists of GP93 were repeatedly invited to keep further diaries (in some cases up to 6 such repeat diaries exist). In Chapter 8, an extended version of the original set is analyzed, taking data up to November 1995.

#### 2.4.1 Sexual Diary Data Archive

Negotiations are proceeding to lodge the SIGMA diary data and programs in the ESRC Data Archive at the University of Essex, to complement the SIGMA interview data already held there and the (anonymised) data will be accessible to any *bona fide* researcher. The following statistics of the Diary data hold as of January 1 1996<sup>25</sup>

- 53,877 sexual acts in
- 25,082 sexual sessions, performed by
- 1035 individuals/months from
- 10 locations/sites.

:

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<sup>25</sup> these numbers exclude the original GT86 data and more recent bisexual diaries

### 2.2.5 Diaries and interviews: validity issues

Under funding from the Department of Health a number of studies have been done on the reliability and validity of these diary studies of sexual behaviour.

These have included:

- comparing the data on sexual behaviour derived from SIGMA interviews and the data from their subsequent month diaries for a subset of SIGMA panel members (usually adjacent months)
- Gay men who made up the GP93 diary dataset were asked after returning their diaries both to estimate the frequency with which they had done various sexual acts in the diary and rate how sure they were of their estimates. (The subsequent estimation procedure was done to simulate an interview situation, but referring to the same month, thus forming a unique comparative data-set). The main findings are reported in Coxon 1995a. The "headline results are as follows:
  - 86% of the diarists returned an estimate form
  - The more frequent a sexual behaviour, the less certain diarists of their estimate. Correlatively, the rare acts (especially fucking) have higher certainty ratings.
  - The profile correlation for sexual behaviour averages between "interviews" and diary-counts is  $r = 0.968$  (linear) and  $\tau = 0.655$  (ordinal), but
  - "Interview" estimates of behaviour are (on average) consistently higher than counts made from their diaries.
  - This holds also on the individual level; two-thirds of acts are over-estimated in the "interview" compared to the diary-counts and only one-fifth of the sample have identical "Interview" estimates and diary-counts.
  - The major individual discrepancies (inaccuracies) between "Interview" and diary-counts are located in "fucking without condom".

Work is currently proceeding on:

- estimating "selection bias" among diary-keepers (i.e. to what extent do diary-keepers differ from non-diary-keepers in their sexual behaviour?).
- alternative methods of collecting sexual diary information (e.g. INTERNET response)
- feasibility studies in extending diary methods to heterosexual and minority ethnic group men and women.

## 2.3 Supplementary Methods

In practice, the project questionnaire and sexual diary data collection were closely intertwined, though a number of diary respondents were recruited quite independently. But relatively little use is made in this volume of the interview data and it does not therefore need separate discussion. On the other hand, the Cardiff site in particular made use of other methods such as participation and/or observation, and this material is reported here.

### 2.3.1 : Participation and Observation

The material in Chapter Seven on "Different Scenes" is primarily based upon participant and/or observation. The Investigators and most staff members were mostly social-science trained and themselves gay<sup>26</sup>, so participation was never a problem in most of the areas referred to in this book.

Systematic observation and/or participation is another matter and since the topic areas chosen are minority pursuits (basically, cottaging and Leather/SM) and strongly dependent on individual *penchant*, observation or participant involvement in these scenes was never required of staff.

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<sup>26</sup> this is by no means to say that gay males were necessarily better as researchers.

### 2.3.1.1 Cottaging and cruising

The cottaging studies were carried out in the period 1982-88 in South Wales and in 1988-95 in Essex by the Cardiff and Essex sites<sup>27</sup> of Project SIGMA. Those involved in the studies included the Principal investigator, part-time research staff of the Project who were recruited specifically to undertake this work, and those permanent members who chose to be involved (it was not part of their job-description), together with SIGMA panel members who were known to be active cottagers and who agreed to be thus involved. Since cottaging and cruising can be construed as an illegal activity (under various legal headings including Vagrancy Acts and more recently under the Criminal Justice Acts) some accommodation had to be reached with the Police and other authorities, since employees of the Project could not be expected to engage in what could be construed as illegal activity. Initial approaches to the South Wales Constabulary met with total opposition, chiefly on the grounds that they could not provide protection for researchers against violence which they maintained the researchers would be subject to. After some negotiation it was suggested that if we wished to persist with the studies this would be acceptable so long as no offence was committed and so long as Police authorities were informed of where we were working. The latter condition was clearly unacceptable, and a final uneasy compromise was reached whereby researchers carried an authorising card with photo which they would produce in the event of a police raid and arrest. In Colchester the Police authorities were more co-operative and a set of arrangements and understandings were worked out by which Police were informed of the identity of researchers and their car-numbers, and researchers carried the ID cards. Researchers were advised not to present the card in the

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<sup>27</sup> other investigations centred on Bristol, Liverpool and Manchester but only in Liverpool were they carried out for more than restricted periods. I am grateful to John Gay and Andrew Greenlees for their painstaking work in these sites.



case of arrest until being charged. (The Researchers' Guidelines for these observation studies are given in abbreviated form in Appendix 2.5, section III).

The view taken on researchers' observation and participation was that if they chose to take part in sexual activity then they could not be covered by any Project "indemnity" in so doing and were responsible for their own actions. Some took on a purely observational "watch queen" role (Humphreys 1970), but several researchers (and of course reporting Project members) were involved in activity to some degree.

It was originally intended that the cottaging studies should also be used to recruit men to the Project panel; in the event this was only done occasionally as those approached were either already respondents or were often unwilling or hostile to being involved in any way in such a study.

The strategy used in covering likely sites was threefold:

1. to carry out a "census" of toilets and known cruising areas (in the greater Cardiff area, in the South Wales valleys between Newport and Swansea, in central Bristol and in Liverpool and Manchester sites) to determine whether there was any sign of homosexual activity.
2. to restrict systematic investigation to a few regular "hot" sites and use time-sampling techniques to cover various period, and
3. to visit other sites intermittently.

A similar strategy was used in Colchester and surroundings, but covering a smaller area.

A "cottaging kit" was developed to facilitate systematic description and report:

- The FIELD RESEARCH SITE RECORD records the Site, Plan of Location, Internal Plan and Description (typical clientele, active periods, police surveillance and warnings, graffiti content and dates)

□ The FIELD RESEARCH OBSERVATION RECORD is filled out for every visit, indicating:

- time, date and weather conditions
- Personnel (cottagers): age, build, attractiveness, sexual show; Clothing: jeans, leather, suit; keys, handkerchiefs and other semantics; vehicle number and apparent origin)
- Sexual Activity: Timing (period of time spent in cottage or cubicle, elapse time before others' moves) Movements, Termination behaviour (talking, exchange of notes, tryst arrangement).

Systematically investigated sites included:

A:CARDIFF:

A48 Near Coedkernew between Cardiff and Newport. Layby with waiting cars, with fields around. Accessible primarily by car, but also by bus. Almost always busy with mixture of out-of-town and local regular clientele. Originally two such sites; both now closed.

A50 On road between M4 and Monmouth; two layby sites with café either side of the dual carriageway and wooded hill-side used for cruising. Popular with lorries and cars.

Mill Lane A small urinal (now destroyed) in the (then) outdoor fruit market opposite the Kings Cross (gay) pub which was an unusually busy cottage.

Castle Grounds (including Sophia Gardens)

Very popular cruising grounds close to town centre, university and colleges. There were several loci with slightly different clientele: Along Taff banks to Blackweir (ostensibly heterosexual trade), Bridge across canal feeder and areas on both sides, Blackweir Bridge and environs) with accessible parking, together with cottage (closed at 18.00). Intermittent police raids, patrolling and cutting of

lower branches of encompassing trees and shrubs did nothing but temporarily diminish its popularity.

### Llandaff North Station

Isolated cottage near a railway station and allotments. Intermittent but heavy activity with rare interruption. One site where fucking (protected and unprotected) was regularly observed.

Other cottages surveyed include: Llandaff Fields, Pontcanna fields, Cathays Park, Crwys Road, Roath Park (Lake Road, East and West), Hayes Underground facility, car-park toilets, BR Cardiff Central toilets and platform toilets, Bus Station toilets, department stores and St David's Centre and Hall and in Newport, Bus station toilets, Multi-storey car-park.

## B: COLCHESTER

### North Station Road:

the optimal location on inner ring road (layby), with close access to the railway station and reachable by car or on foot. It is consistently popular and busy, with a very mixed clientele and occasional rent and trade. Other sites are walkable from this location, including the Lorry Park, which is quieter and where longer sex sessions occur, and the Castle Park

### Sheepen Road

consists of wooded fields and undergrowth behind the Colchester Institute, especially popular at night (and including heterosexual couples and cruisers) and at College times. It is the local equivalent of Hampstead Heath.

Other sites include Witham, Bury St Edmunds, Coggeshall. Appendix 2.5 contains the Guidelines which informed this activity.

### 2.3.1.2 Leather/SM

The Leather/SM research depend on two studies: the Hunt study and the Coxon study of somewhat different form.

#### **Hunt study**

In the second Wave (1989) interviews of Project SIGMA a set of questions [D7; D7.1- to 7.6] were included which related to SM, concluding with one which said: "*Would you be prepared to talk about your SM experience in more detail to another researcher?*". The questions were analysed (and further interviews conducted) by Andrew Hunt, then Senior Researcher at the London SIGMA site and himself a participant in the Leather/Rubber/SM scene. The 691 respondents in Wave Two who answered these questions thus form a unique, large and fairly representative sample of gay men and their attitudes to SM, as well as providing a subsample of those involved in the area. His report remains unpublished except as a working paper (Hunt 1991) and the data reported here for the first time are drawn from that report.

#### **Coxon study**

Townsend's Leatherman's Handbook contains a simple questionnaire and some summary results from his own studies. During the mid 1980s this was modified and extended by the author for his own personal use as participant on the Leather/SM scene, and later systematised (Coxon 1991) and used more extensively by being given primarily to other Masters for distribution to their slaves as part of the scene. This networking procedure has produced 135 completed questionnaires and has clearly penetrated the SM scene to a considerable degree, primarily in London and the Home Counties, but also in the Midlands, North of England and Scotland. This work has been augmented by the post-graduate research work of Wouter Geurtsen (University of Tilburg) on the Leather scene in London and Amsterdam and supervised by me in his English work.

The respondent sample is clearly biased towards slaves, and to those undertaking longer-term commitment rather than one-night encounters. It also under-represents those who do not operate within the "SSC" (Safe, Sane, Consensual) framework. Despite these biases, the data are very reliable and have usually been checked-out behaviourally by the other SM partners (usually the Masters involved and in some cases also by the slaves involved).

List of practices (behaviours) included in the questionnaire include:

Practice	Code
Active Cocksucking	(AS)
Passive Cocksucking	(PS)
Active Arse-fucking	(AF)
Passive Arse-fucking	(PF)
Active Rimming	ARi)
Passive Rimming	(PRi)
Bondage	(BO)
Whipping/belting	(CP1)
Cane/crop	(CP2)
Cat o' 9-tails	(CP3)
Fistfucking	(FI)
Water-sports	(WS)
Scat	(SC)
Cock&Ball work/torture	(CBT)
Tit work/torture	(TT)
Piercing	(PI)
Using dildoes/buttplugs	(FD)
Using hood/blindfold	(/h)
Bootlicking/teing	(BL)
Genital shaving	(SH)
Full body shaving	(BSH)
Candle-wax	(WX)
Electricals	(EL)

The fantasy items referred to in the text of Chapter Seven apply to the question "My wank fantasies include ..." and are:

- |   |   |
|---|---|
| <input type="checkbox"/> Leather clothing | <input type="checkbox"/> Slings/suspension            |
| <input type="checkbox"/> Being stripped   | <input type="checkbox"/> Stripping another            |
| <input type="checkbox"/> Being bound      | <input type="checkbox"/> Binding someone else         |
| <input type="checkbox"/> Being whipped    | <input type="checkbox"/> Whipping another (guy)       |
| <input type="checkbox"/> Fucking another  | <input type="checkbox"/> Being fucked                 |
| <input type="checkbox"/> Getting raped    | <input type="checkbox"/> Raping another               |
| <input type="checkbox"/> Being pissed on  | <input type="checkbox"/> Pissing on another           |
| <input type="checkbox"/> Being humiliated | <input type="checkbox"/> Humiliating another          |
| <input type="checkbox"/> Being enslaved   | <input type="checkbox"/> Enslaving another            |
| <input type="checkbox"/> Being castrated  | <input type="checkbox"/> Castrating another           |
| <input type="checkbox"/> Being hanged     | <input type="checkbox"/> Lynching another             |
| <input type="checkbox"/> Interrogation    | <input type="checkbox"/> Military scenes              |
| <input type="checkbox"/> Dog scenes       | <input type="checkbox"/> Flogging scenes              |
| <input type="checkbox"/> Piercing scenes  | <input type="checkbox"/> Group scenes                 |
| <input type="checkbox"/> Outdoor scenes   | <input type="checkbox"/> Other/s: ( <i>Specify:</i> ) |

### 2.3.2 Blood and Saliva Testing

Following the extended discussions with the MRC about blood-testing for HIV-1 antibodies in the early stages of the Project (see §1.2.2), all SIGMA respondents were asked to give a blood sample for testing. In the full course of the Project over 2000 blood samples were taken, without a single instance of needle-stick or similar injury. The proportion agreeing to give a blood sample was usually about two-thirds and increased systematically as the Project proceeded. Blood samples were taken by interviewers (who had been trained as phlebotomists) after the subject had given informed consent. Respondents could opt to be told or not to be told the result. If respondents wished to know the result of their blood test, the person taking the blood pre-counselled them. If they chose to be told their result they were post-test counselled and given their result by the

Clinical Investigator in the London site (Dr TJ McManus) or the Principal Investigator in the South Wales site (the author).

Saliva tests, which had been developed as an alternative to blood-testing, (Johnson, Parry, Best et al 1988) were also used, initially to parallel the blood tests and in a pioneer study to assess the feasibility of using saliva-testing in a field setting (Hunt , Connell, Christofinis et al 1993). Additionally, saliva tests were administered if the respondent agreed so that the results could be calibrated against their blood result and thus assess the saliva test's specificity (error in falsely identifying a negative results as positive) and sensitivity (error in failing to detect a positive result) to HIV-1. Blood samples were tested for HIV-1 antibodies and for a range of other viral markers<sup>28</sup> , including Hepatitis-B.

As the Panel continued, the original sample became more dispersed geographically and it became less feasible to visit Panel members twice -- to interview and bleed them, and then to return to give them their result. In later Waves it was decided to rely solely on saliva tests (and therefore not give results). In recent times non-Panel diarists are asked to self-administer the saliva test and return it with their completed diary.

Sero-prevalence results from SIGMA are reported in Hunt , Christofinis and Coxon et al (1990) and Hunt , Davies , McManus et al (1992).

[12,490 words]

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<sup>28</sup> blood samples were ultimately tested for a range of viral markers including HIV-1, CMV, HBSANTIGEN, HBVANTICOR, ANTIHBS, HAVG, HAVM, HCV, VZV, EBV, HTLV-1, HHV6, TOXO, ADENO, DELTA, HSV.

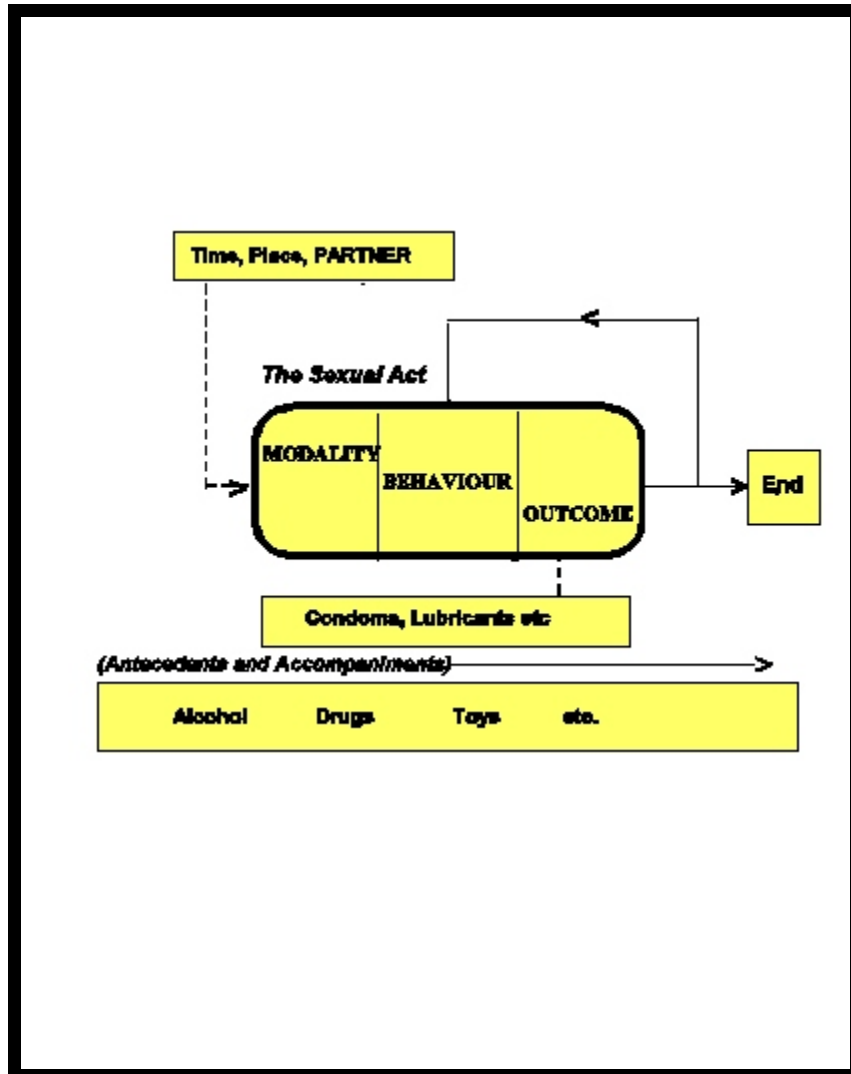


Figure 2.1 SIGMA schema of sexual behaviour



# SIGMA SEXUAL DIARY FORM

(Version: 11/92)

ID Number : \_\_\_\_ / \_\_\_\_ / 5

WEEK BEGINNING : \_\_\_\_ 3 / MAY \_\_\_\_ / 1992  
(day) (month) (year)

*Remember, each session should include:*

- The Time, The Place, The Partners (from partner list)
- Then, the session in your own words
- If you "come" (ejaculate) in the session, remember to be explicit about where it goes and always to record the use of condoms.
- List any accompaniments you use (poppers, lubricants, drugs, sex toys, ...)

Sunday	9am My flat, P1
_____DAY	We deep kissed, and moved into a "69". Whilst doing it I began to finger him. Then he wanked me (both using poppers) and I came. Following that I wanked him till he came.
Monday	12.30pm Lunch-time wank at work; I didn't come
_____DAY	
4th	
Tuesday	
_____DAY	
5th	
Wednesday	11.30pm, Hampstead Heath, P2: We wanked each other off; both came. 12.15am (Thurs) P3: I sucked him, then he put on a condom and fucked me; he came.
_____DAY	
6th	

Thursday	(see above: Wed)
_____DAY	
7th	
Friday	8.30 reading porn: quick wank to orgasm.
_____DAY	
8th	11.00 p.m. P1's flat. After eve at The Bell (4 pints), I sucked P2, then he fucked me and came (no condom).
Saturday	7.30 a.m. I woke up to find P1 wanking me. Then he sucked me off, and I came in his mouth. We began using poppers
_____DAY	and I sucked him, carrying on to fuck him (with condom), whilst he wanked himself. He came, I didn't.
9th	

**Figure 2.2: Example of a one-week diary**

**Figure 2.3: Guide to Codes for Sexual Act Components**

**Modalities:**  
**S ... elf**  
**H ... im**  
**A ... ctive**  
**P ... assive**  
**M ... utual**

**BEHAVIOURS**

W...anking  
 F...ucking  
 S...ucking  
 DK..issing  
 V...aginal intercourse  
 CN **Cunnilingus**  
 RI...mming  
 TF **Thigh Fuck**  
 FG **Fingering**  
 FI...sting  
 BR **Body Rub**  
 MA...ssage  
 CP **Corporal Punishment** (of some form)  
 DO...uching (Enema)  
 TT **Tit Torture** (Nipple play)  
 WS **Water Sports**  
 FD **Fuck with a Dildo**  
 BD **Bondage**  
 CE **Cock & ball play/torture**

<b>Code</b>	<b>OUTCOME Destination</b>
<b>N</b>	No ejaculation
<b>X</b>	Ejaculation `elsewhere'
<b>I</b>	On Me (ie: on EGO)
<b>O</b>	On Him (ie: on ALTER)
<b>C</b>	into a Condom
<b>H</b>	In Him (ie: in ALTER)
<b>M</b>	In Me (ie: in EGO)



