

## Sexual Bondage: A Review and Unobtrusive Investigation

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*To investigate unobtrusively how individuals experience sexual bondage, we analyzed all messages about sexual bondage (N = 514) mailed to an international computerized discussion group on sexual bondage in 1990. The most frequent individual experience reported (n = 60) was playful use of bondage to explore new areas of sexual pleasure. Other frequent experiences were the exchange of power, intensified sexual pleasure, and tactile stimulation and bodily sensations. Preference for the dominant-initiator role was expressed in 71% of the messages by male heterosexuals, 11% of the messages by heterosexual females, and 12% of the messages by homosexual males. Preference for the submissive-recipient role was expressed in 29% of the messages by heterosexual males, 89% by heterosexual females, and 88% by homosexual males. In 33% of messages subjects stated that sexual bondage occurred simultaneously with sadomasochism or was perceived as part of it.*

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**KEY WORDS:** sexual bondage; paraphilia; sexual attraction; sadomasochism.

### INTRODUCTION

Some individuals desire to physically bind or restrain other individuals for their own sexual excitement or for the sexual excitement of their partner. Conversely, others desire to be physically bound or restrained for their own sexual excitement or for the sexual excitement of their partner. Enacting these desires is called *sexual bondage*, that is, the use in sexual behavior of physically restraining devices or materials that have sexual

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significance for at least one partner. Autoerotic behavior can also include elements of sexual bondage.

Sexual bondage appeared in the erotic art of traditional China and Japan. Although suppressed by Confucianism, the bondage tradition survived in Japan, where bound women remain a common theme of contemporary film and novel pornography (Abramson and Hayashi, 1984). There are also historical accounts of sexual bondage in the medieval Indian writings on love, *The Koka Shastra* (Brame *et al.*, 1993).

Nineteenth-century pornographic fiction was full of bondage stories (Bullough, 1977), and current mainstream and adult films, videos, and magazines frequently depict sexual bondage. One study found that bondage and discipline imagery was by far the most prevalent variant imagery of current heterosexual pornography and was featured in 17% of all magazines studied (Dietz and Evans, 1982). *Playboy* (1976) reported that 3% of college students practiced and enjoyed sexual bondage. Another study reported an interest in sexual bondage by 18% of the subscribers to a magazine published for those with an erotic interest in piercing (Buhrich, 1983).

In many places individuals have formed clubs and friendship networks for those interested in sexual bondage and related variant sexual behaviors. Some of these societies publish newsletters and magazines containing information, feature articles, and personal advertisements. In the language of the bondage subculture, bondage is often called B&D (bondage and discipline), which is distinguished from D&S (dominance and submission) and from S&M (somasochism).

It is difficult to find definitions that are acceptable both to individuals involved in the sexual subculture, and to scientists, of the three concepts central to sexual bondage: D&S, S&M, and B&D. D&S is frequently used as a broad term encompassing the other two and a range of other sexual variations, such as fetishism and transvestism, when the resulting sexual behaviors include the exchange of power. B&D in its restrictive sense refers to the use in sexual behavior of physically restraining materials or devices, or to the use of psychologically restraining commands. These commands may enforce obedience, servitude, or enslavement, without inducing physical pain. B&D may involve some physical punishment, which is distinguished from somasochism if the punishment is an expression of psychological sexual discipline, and is not primarily intended to cause physical pain. S&M refers to sexual behaviors that include inflicting and/or receiving physical or psychological pain. Thus, sexual bondage does not necessarily include dominance and submission, or somasochism. The relationship between D&S, B&D, and S&M is illustrated in Fig. 1, which is intended only as a representation of the relationship, without any claim of accuracy in proportions, overlap, etc.

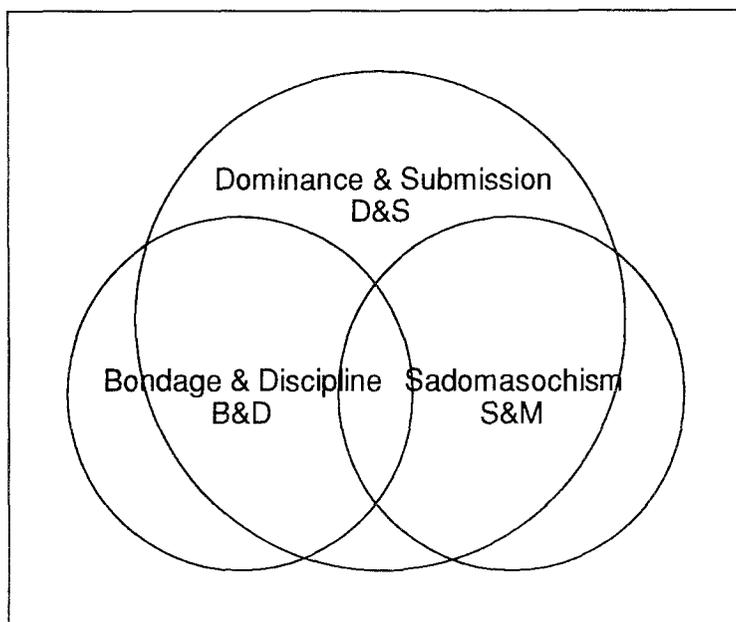


Fig. 1. Concepts central to sexual bondage.

### Dominance and Submission

Dominance and submission (D&S) include a variety of sexual and recreational behaviors that involve consensual power exchange between partners. The dominant partner usually executes the stimulation, which can be verbal, tactile, or a combination of these. It is common that the partners enact fantasized roles, such as teacher-pupil, prison guard-inmate, or officer-menial. The submissive partner is often physically bound, restrained, or rendered helpless and subjected to prolonged sexual tantalization. The goal is usually orgasm, but D&S can be sexually satisfying without leading to orgasm (Scott, 1983).

Professional counselors and psychotherapists have often adhered to disease models of sexual dominance and submission, and their generalizations have frequently been based on studies with clinical samples. Scott, however, conducted an empirical study of individuals involved with the heterosexual D&S subculture, and did not find these individuals to be psychologically troubled or socially inept; rather, a spirit of good humor and fun prevailed. Most members of the D&S subculture were content with

their participation and some saw themselves as special, creative, more exciting people because of their unique interest.

Dominance and submission are central themes in mainstream sexual attraction and sexual fantasy. Studies show dominance behavior to enhance the popularity and sexual attractiveness in men (Sadalla *et al.*, 1987) and to decrease the popularity of women (Costrich *et al.*, 1975).

In a study of sexual fantasies, men and women rated themselves as taking an active or passive role in the fantasy themes. Of the men, 54% rated themselves as predominantly active, whereas 28% rated themselves as predominantly passive. Of the women, 31% rated themselves as predominantly active, whereas 62% rated themselves as predominantly passive (Zimmer *et al.*, 1983). In a group of suburban housewives, "submission" and "imaginary lover" were the most common themes of erotic fantasy during intercourse (Hariton and Singer, 1974). Scott (1983) reported that about two thirds of the male sexual fantasies described by Friday (1980) contained elements of male submission.

In a study of sexual fantasies in homosexual men, forced sexual encounters were common where the men imagined themselves as victims. Victims were usually pictured as restrained and forced into sexual service by physical abuse such as whippings or beatings (Masters and Johnson, 1979).

### *Dominant-Initiator Versus Submissive-Recipient*

It is often difficult to determine if sexual behaviors are active or passive. An individual who performs fellatio on another individual is active in the sense that he or she is the agent who acts out a behavior on another individual. The one who performs fellatio can, however, often be regarded as passive if he or she performs the fellatio as a submission to the desire of the active individual who receives the fellatio. We therefore use the terms *dominant-initiator* and *submissive-recipient* instead, which more precisely describe the agency of the partners.

Earlier studies found a disproportion of individuals who prefer the submissive-recipient role compared to the dominant-initiator role. One study of fantasies among heterosexual sadomasochists found that submissive themes had a greater frequency than dominant or sadistic themes (Gosselin, 1981). Another study of restroom graffiti by homosexual males found that in sadomasochistic sexual behavior, 71% of the homosexual males preferred the submissive-recipient role, and 21% preferred the dominant-initiator role, whereas 2% preferred versatile roles (6% did not state a role preference) (Innala and Ernulf, 1992).

Some individuals may prefer to be versatile, or they may change their preferred roles. Observers of the S&M community have noticed that many dominant-initiators started as submissive-recipients. They may explain this themselves with a need for training as submissive-recipients to become good and empathetic dominant-initiators.

Proponents of self-awareness theory have suggested that the value of masochism as an escape from self is lost if submissive-recipients come out as masochists. After coming out masochists may therefore shift their preferred role and eventually become dominant-initiators (Baumeister, 1988).

It seems socially desirable in the S&M community to be able to shift roles, and advertisers in S&M contact publications often make a point of their “flexibility,” “versatility,” and “bisexuality” (Weinberg, 1983). The fact that many individuals are versatile in their sexual behavior does not mean, however, that they prefer both roles to an equal degree. It has also been reported that many members of the heterosexual S&M community prefer that their members declare their principal interest in one role only (personal communication).

### *Social Class*

There is some evidence for a social-class difference. Working-class clients of prostitutes purchase mainly fellatio and traditional intercourse (Diana, 1985), whereas upper-class clients frequently request to be sexually dominated (Baumeister, 1988; Janus *et al.*, 1977; Symanski, 1981). The higher the socioeconomic status of students, the greater the probability that they have either fantasized about—or engaged in—bondage-type behaviors (Eve and Renslow, 1980). One researcher found that people engaging in bondage tend to be better educated and from higher income and occupational brackets than average (Scott, 1983).

### **Sadism, Masochism, and Sadomasochism**

The term *sadism* refers to Marquis de Sade (1740–1814), French author, philosopher, and sadomasochist, who described literarily the pleasurable sexual experiences of people who enjoyed to hurt, dominate, and humiliate their sexual partners, and people who enjoyed being hurt, dominated, and humiliated. Some of his best-known works are *Justine* (published in 1791) and *Juliette* (published in 1797) (Sade, 1986). A hundred years later, Sacher-Masoch (1836–1895), an Austrian historian, author, and masochist, wrote the novel *Venus in Furs* (Sacher-Masoch, 1980), an account of the experiences of a male submissive. The sex researcher Krafft-Ebing

(1849–1902) coined the term *masochism* from the latter part of Sacher-Masoch's family name. Sadism and masochism were frequently studied by the early sex researchers, and sometimes their analyses also included elements of dominance and submission, and bondage and discipline.

Krafft-Ebing believed that sadism is a pathological exaggeration of the normal psychology of men and that masochism is a distorted extension of normal female sexual inclinations. He saw sadism as an essentially masculine disorder, and masochism as a feminine disorder. In *Psychopathia Sexualis*, which first appeared in 1885, Krafft-Ebing described sadism as the experiencing of sexual desire up to the pitch of orgasm when accompanied by humiliations, chastisement, and all manner of cruelties inflicted upon a human being or an animal, and also the impulse to evoke such feelings of desire by means of the appropriate treatment (Krafft-Ebing, 1885/1959, p. 227).

By masochism Krafft-Ebing meant “a peculiar perversion of the mental *Vita sexualis* consisting in its victim being overmastered in his sexual feelings and thoughts by the concept of being completely and utterly subjected to the will of a person of the opposite sex, being treated *de haut en bas* and humiliated and even maltreated by that person” (p. 270).

Freud (1856–1939) wrote extensively on sadism and masochism. He recognized the existence of sadism in “the normal individual.”

The sexuality of most men, shows an admixture of aggression, of a desire to subdue, the biological significance of which lies in the necessity for overcoming the resistance of the sexual object by actions other than mere courting. Sadism would then correspond to an aggressive component of the sexual instinct, which has become independent and exaggerated and has been brought to the foreground by displacement. (Freud, 1938, p. 569)

Freud saw sadism and masochism as two forms of the same entity, and he noted that they were often found in the same person.

Ellis (1859–1939), a pioneer of modern sex research, not only rejected the idea that sadomasochism was based on cruelty but believed that *much of this behavior was actually motivated by love*. Ellis (1942) noted that “sadists” limit their “love to pain” to sexual situations—and that the sadist is concerned with the sexual pleasure of the “victim.”

Contemporary sexologists tend to view severe forms of sadomasochism as a sexual disorder, but there is little consensus on what constitutes sadomasochistic components of normal sexual behavior and what is pathological. The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III-R; American Psychiatric Association [APA], 1987) includes sexual sadism and sexual masochism, but certain minimum criteria for these diagnoses must be fulfilled:

*Sexual Sadism:* The essential feature of this disorder is recurrent, intense, sexual urges and sexually arousing fantasies, of at least six months' duration, involving acts (real, not simulated) in which the psychological or physical suffering (including humiliation) of the victim is sexually exciting. The person has acted on these urges, or is markedly distressed by them. (p. 287)

*Sexual Masochism:* The essential feature of this disorder is recurrent, intense, sexual urges and sexually arousing fantasies, of at least six months' duration, involving the act (real, not simulated) of being humiliated, beaten, bound, or otherwise made to suffer. The person has acted on these urges, or is markedly distressed by them. (p. 286)

Money (1986, pp. 269, 265) defined sadism as “a paraphilia of the sacrificial/expiatory type in which sexueroetic arousal and facilitation or attainment of orgasm are responsive to, and dependent upon being the authority who imposes abuse, torture, punishment, discipline, humiliation, obedience, and servitude.” He defined masochism as “a paraphilia of the sacrificial/expiatory type in which sexueroetic arousal and facilitation or attainment of orgasm are responsive to, and dependent upon being the recipient of abuse, torture, punishment, discipline, humiliation, obedience, and servitude.”

Stoller (1991) described how he changed his mind about bondage and S&M after having studied bondage and S&M houses in California. “Presuming that almost everyone else is as I was, it may interest you to note my change in attitude” . . . “So, though I found my informants' games unappealing (just as they may find our ‘vanilla’ practices), I no longer extrapolate and think these people are freaks” (p. 21).

Baumeister (1988) pointed out that the practice of masochism should not automatically be regarded as a symptom of mental illness, for it appears to occur most commonly among normal and successful persons. He argued that masochism should not be regarded as derived from sadism, as it is more common than sadism, and where both patterns are found, masochism generally comes first. He drew on theories of self-awareness and regarded masochism as a way to provide a temporary and powerful escape from high-level awareness of self. Masochistic practices would replace this self-awareness with a low-level temporally constricted awareness of self as a physical body, focusing on immediate sensations and on being a sexual object. Other authors have also maintained that sadomasochism is not necessarily related to psychological disturbance (Dietz and Evans, 1982).

### **Bondage and Discipline**

Sexual bondage is part of bondage and discipline, where discipline signifies psychological restraining, such as control, training, and nonphysical

punishment. Individuals may control partners by ordering them to perform, or not to perform, certain sexual behaviors, or can order them to perform eroticized nonsexual behaviors. Such behaviors may include running errands, doing house cleaning, or dressing in a special way. Depending on how well the behaviors are performed, reward or punishment may follow.

Several researchers of B&D have used nonclinical samples or have proposed other than disease-oriented models. Baumeister (1988) analyzed the desire to take a submissive-recipient role in bondage as a sign of masochism, eliminating the freedom of action and initiative. He contended that the individual in bondage is relieved from initiative, choice, and responsibility for sex acts that might otherwise cause conflict. Baumeister argued that bondage is an escape from high-level awareness of the self, as the responsible, decision-making aspect of the self is prevented by bondage. Being tied up may promote low-level, immediate self-awareness by focusing attention on one's helplessness and vulnerability.

Scott (1983) reported that some men who like bondage have remembered that they had early submissive fantasies or enjoyed being captured or tied up when they played Cowboys and Indians as children. Others discovered their submissive sides as adults, and when they encountered it, they enjoyed it. Some of these men remembered a first submissive thrill when a lover playfully tied them up.

Heilbrun and Seif (1988) studied 54 college-age men, viewing erotic pictures of women in bondage who displayed physical distress. The men found these pictures more sexually stimulating than pictures where the female model displayed positive affect. Zillman and Bryant (1986) studied student and nonstudent men and women subjected to continued exposure to generally available, nonviolent pornography. The pornography exclusively featured heterosexual behavior among consenting adults. Results showed that it aroused an interest in and created a taste for pornography that portrayed less commonly practiced sexual activities, such as sexual bondage.

Scott (1983) observed that women who have an interest in B&D do not report early fantasies as much as men do. Many women enter sexual discipline during an emotional relationship, rather than because they initially find it erotic. Of the few women who discover sexual discipline on their own initiative, most have fairly unusual backgrounds or training in psychology or the social sciences that lead them to be more open to sexuality than most women or to want to better understand unusual sorts of sexual behavior.

Fantasy is a crucial component in sexual bondage, and the partners often agree on fantasy scenarios before they are acted out. In a study of 72 male and female students, with a mean age of 24, 13% reported sexual

arousal when fantasizing about being bound (Eve and Renslow, 1980). Fantasies are not always acted out, and it has been reported that sometimes fantasies have their strongest arousing effect if not acted upon (Scott, 1983).

One study of B&D in sexually explicit magazines that depicted relationships with unequal power roles showed that men were dominant in 71% and submissive in 29%, of the situations (Winick, 1985). In a study of 94 men, who had lived with a woman for at least 1 year, the contents of their sexual fantasies during heterosexual activity centered on three main themes: confirmation of sexual power, aggressiveness, and masochistic fantasies. Of these men, 39% sometimes fantasized about a "scene where you tie up a woman and stimulate her sexually" and 36% sometimes fantasized about a "scene where you are tied up and sexually stimulated by a woman" (Crépault and Couture, 1980).

Several researchers have reported that sexual bondage may coexist with other variant sexual behaviors. Such behaviors include sadomasochism (Spengler, 1977), transvestism (Blanchard and Hucker, 1991), autoerotic asphyxia (Blanchard and Hucker, 1991; Innala and Ernulf, 1989), and homosexuality (Townsend, 1983).

### Rationale

Little attention has focused on the experiences of male and female subjects who practice sexual bondage. Yet, the experiences of individuals involved are crucial for understanding why some individuals repeatedly engage in bondage and discipline behaviors.

The present study was designed primarily to examine what experiences in sexual bondage are sexually stimulating, what experiences lead to sexual satisfaction, and how experiences differ between individuals. The study also examined what proportion of heterosexual and homosexual individuals prefer the dominant-initiator role, or the submissive-recipient role.

Many earlier studies of bondage and sadomasochism have used clinical samples, which are problematical because of their pathological bias. Other studies interviewed subjects who have belonged to sadomasochistic clubs or bondage societies. There is a risk that such subjects try to give socially desirable answers, as they want to change society's negative attitudes toward bondage and sadomasochism. Therefore we aimed at using an unobtrusive observational technique to minimize this type of bias.

## METHOD

### Subjects and Materials

Subjects were participants in an international computerized discussion group on sexual bondage, a group that was part of the Internet/USENET news system. The Internet links nearly all networked university computers throughout the industrialized Western world, either directly or through gatewayed networks, such as EARN, CREN, SUnet, and USENET. Universities in the former Soviet block, and universities in developing countries, have also begun to appear on the Internet. In the fall of 1992 there were more than 1,000,000 computers on the Internet worldwide (Sunetten, 1992). Anyone connected to the Internet can use freely available software to access its news system, provided the system administrator has set up a news feed link to another site that carries the news. Thus, the Internet news system has a vast number of potential participants in its discussion groups.

The discussion groups are organized in a hierarchical system, which is reflected in their names, where levels are separated by dots. The sexual bondage group was named *alt.sex.bondage*, which indicates a group within the top domain *alt*. This domain encompasses groups about alternative lifestyles, sports, and leisure. The subdomain *alt.sex* includes different discussion groups on human sexuality, and *alt.sex.bondage* specifically caters to individuals interested in sexual bondage.

Participants send messages to the group, and anyone who elects to read the particular news group can read these messages. Anyone can post replies and follow-up messages to the group or send such replies to the author of the message. Some authors choose to include their real names, whereas others send anonymous messages to the news groups. Posting anonymous messages means sending the messages to a computer that provides so called "anonymous posting service."

### Procedure

For this study, we collected all messages ( $N = 3560$ ) posted to *alt.sex.bondage* during 1990. The messages were saved in machine-readable form for later analysis.

Most messages contained information that was not related to bondage, or they contained information about variant sexual behaviors other than bondage, such as transvestism, autoerotic asphyxia, and piercing. In line with our purpose we analyzed only those messages that referred explicitly to sexual bondage ( $n = 514$ ). In a content analysis, where posters

of the messages were regarded as subjects, we coded these messages for: (i) country of subject; (ii) sex of subject; (iii) sexual orientation of subject; (iv) age of subject; (v) experiences during sexual bondage; (vi) preference of subject for the dominant-initiator or the submissive-recipient role in sexual exchange; and (vii) simultaneous paraphilias.

These categories were chosen because of their relevance for the study. Subcategories were introduced as needed during the analysis process. Categories were not mutually exclusive, and a message could thus appear in more than one category. There was no way to ensure that a subject was included only once. The same subject may thus have contributed one or more of the analyzed messages.

## RESULTS

### Demographics

*Country of Subjects.* For messages that were not posted through an anonymous posting service, we could determine the country of origin from the computer address, which is automatically inserted in the header of every message. Eighty percent were posted from the United States, but messages also originated in Australia, Canada, Finland, Germany, Japan, The Netherlands, Norway, Sweden, and the United Kingdom.

*Sex and Sexual Orientation of Subjects.* Seventy-two percent ( $n = 372$ ) of the 514 messages were written by males, and 24% ( $n = 123$ ) of the messages were written by females. In the remaining 4% ( $n = 19$ ) of the messages the subject did not state his or her sex. Of the messages where males stated their sexual orientation ( $n = 98$ ), 81% stated a heterosexual orientation, 18% a homosexual orientation, and 1% a bisexual orientation. Of the messages where females stated their sexual orientation ( $n = 62$ ), 87% stated a heterosexual orientation, 10% stated a lesbian orientation, while 3% stated a bisexual orientation.

*Age.* Only a few messages mentioned the age of the subject.

### Experiences During Sexual Bondage

Categorizations of experiences during sexual bondage were sorted after their frequency of occurrence and are shown in Table I. Subcategories were introduced as needed during the analysis process.

Other categories, with frequencies of messages less than 10, were *fulfillment of sexual fantasy scenarios* (4), *sexual experimentation* (3), *trust and*

Table I. Experiences During Sexual Bondage<sup>a</sup>

Experience	<i>n</i>	Example
Play	60	"We've both been into it ever since our childhoods. I've told her about the bondage games I played when I was in grade school ... she's told me about how she practiced tying herself up ever since she was a young'un . . . interesting! Some of our best sex has been vanilla, but the games we play are a great expression of our mutual trust and love, and I'd be sorry to do without them. Sex is funny, and sex is lovely, and sex is PLAY; the best kind of play, one in which there are no losers, but we both WIN (and how!)."
Exchange of power	19	"I view all SM scenes (and for me SM means SexMagic; neither pain nor slave trips need be involved) as an interaction between top and bottom in a complementary couple-dance—one leads, the other follows; one is Yang, one Yin. As is usual in Yin/Yang interactions, a wonderful dance can be created by the coupling, so long as the energies are indeed complementary."
Intensified sexual pleasure	15	"To increase the sexual pleasure of the person being tied up ... "
Tactile stimulation and bodily sensations	13	"Enjoyed the different sensations of various different sorts of bond against various parts of my body."
Enhancement of visual enjoyment of partner	12	"I wanted to feast my eyes on this beautiful sight, but I'm a little bit shy about staring. I found a bandana to put over her eyes and I looked close. I looked at her breasts, heaving, warming her nipples with my breath. She was loving this, not knowing exactly what I was up to, but knowing that she was in for the sexual experience of her life."
Partners' sexual pleasure	11	"The pleasure in being dom (for me) is vicarious—I enjoy making my partner feel that good (especially since I know how good it feels)."
Control of the sexual stimulation and prolonged orgasm	11	"Teasing, the delightful torture of bringing one's partner to the aching edge of pleasure, holding them there for a long time, then forcing them over the edge, over and over, till it's almost unpleasant."

<sup>a</sup>Experiences ordered after frequency of occurrence;  $n \geq 10$ . The same message may appear in one or more categories.

*care (2), not knowing what will happen (2), objectifying of partner (2), and a life-style (2).*

### Preference of Subject for the Dominant-Initiator or the Submissive-Recipient Role in Sexual Exchange

To compare preferences among subjects for the dominant-initiator role and the submissive-recipient role, we tallied those messages where subjects expressed preference for either role. Results were broken down by sex and sexual orientation (Table II).

### Simultaneous Paraphilias

In 170 messages (33%), subjects mentioned sadomasochism, which either occurred simultaneously with sexual bondage or was a perceived part of it. In 7 messages subjects mentioned exhibitionism, zoophilia, voyeurism, foot fetishism, and piercing as simultaneous paraphilias.

### Other Observations

*Definitions.* Many subjects discussed vividly the definitions of bondage, dominance, and sadomasochism. In 8 messages subjects contended that bondage by necessity is part of sadomasochism, whereas in equally many messages subjects contended that bondage is separate from sadomasochism. Even some subjects who appeared very experienced had different views on terminology. There were also subjects who strongly opposed being classified with sadists and masochists.

*Bondage and Discipline Culture.* In 2 messages subjects mentioned the "B&D culture" with characteristics such as an interest in motor bikes, science fiction, computers, and humor. One subject expressed it like this: "Frequent S&M/B&D types: science fiction, role playing, motorcycles, computer/engineering, and certain kinds of humor. Thinks it comes from a com-

Table II. Proportion and Number of Messages Where Subject Expressed Preference for the Dominant-Initiator Role or the Submissive-Recipient Role in Sexual Exchange

Subject	Dominant-initiator		Submissive-recipient		Binomial probability
	<i>n</i>	%	<i>n</i>	%	
Male					
Heterosexual	39	71	16	29	< .001
Homosexual	1	12	7	88	< .05
Female					
Heterosexual	4	11	33	89	< .001
Homosexual	0	—	0	—	ns

mon open-mindedness, fascination with the unknown and unusual, daring and with a respect for the absurdity of life.”

*Physical Attractiveness.* Physical attractiveness was mentioned in four messages. Three males declared that “attitude is the most important thing.” “The mind and soul are more important than the body.” “It really doesn’t matter. More concerned with the kind of person they are than what they look like.” “The main thing I find attractive in a sexual sense is a willingness to be open, to experiment, to play around.” One female said that “Scars, lots of flesh, and other body characteristics are just interesting to most of us. A perfect body like the magazine models have isn’t anywhere near as interesting as a body that’s been used, marked up, and keeps records of what happens to it.”

*Safety.* In 36 messages subjects gave safety advice. One male said: “Safety and responsibility is vital. Play hard but play safe.”

*Characteristics of “Good Tops.”* In 15 messages subjects mentioned characteristics that they regarded as desirable in “good tops,” that is, in individuals who take the dominant-initiator role in sexual exchange. These characteristics included prudence, responsibility, and caring. There were remarks, such as: “The best tops have been almost telepathically observant”; “Often the top does exactly what the bottom wants done. The bottom is usually the one in control, since it is the bottom that sets the pacing, and the limits of how far to go”; “The top tests the bottom’s limits of sensation. Helps the partner to explore the limits of sensation”; “A good top is an empath who knows how to tell with the least possible feedback exactly what will blow the bottom’s mind. The top enjoys his pleasure vicariously. He has a great time. The idea is to turn the body into a sexual response machine.” In 12 messages subjects regarded experience as crucial for being a good top and mentioned that good tops often had started out as bottoms. In equally many messages subjects contended that the experience of being a bottom is a necessity for being a good top. One subject mentioned that the best top is the most observant one, who can read what is going on in the mind of the bottom. An unobservant or intoxicated top can be directly hazardous to the life of the bottom.

## DISCUSSION

First we comment on some demographic results and then on the experiences of sexual bondage. Next we comment on the disproportion between those who prefer the dominant-initiator role and those who prefer the submissive-recipient role. Finally, we analyze other issues that emerged during the analysis of the results.

## Demographics

### *Country of Subjects*

Most of the messages originated in the United States. This was probably because the United States is dominating generally on the international computer discussion lists on the Internet/USENET.

### *Sex of Subjects*

Of the messages, where subjects stated their sex, 75% were written by males. As male subjects are overrepresented generally in the discussion groups on the Internet/USENET, no conclusions can be drawn from this figure about the proportion of males and females oriented toward sexual bondage. Yet, it is noteworthy that such a large proportion as 25% of the messages, where subjects stated their sex, were written by females, as the expected proportion of females among most paraphilias is much smaller.

### *Age*

Only a few messages mentioned the age of the subject. That indicates that age is not an important characteristic for individuals oriented toward sexual bondage. Some have reached a mature age before they start practicing sexual bondage and are therefore in a bad position if they prefer young partners. Investigators of the heterosexual S&M community have noted that their members tend to join the community at a mature age (Spengler, 1983). Research has also shown that homosexual sadomasochists tend to start practicing sadomasochism much later than they start practicing homosexuality (Spengler, 1983).

### *Physical Attractiveness*

Physical attractiveness was rarely mentioned in the messages as a sexually desirable trait. A couple of subjects pointed out that individuals oriented toward sadomasochism show a low interest in the physical attractiveness of their partners, and similar dynamics may operate on individuals oriented toward sexual bondage. These individuals often start to practice sexual bondage at an age when most of their youthful physical attractiveness has already faded. They may therefore have difficulty in finding physically attractive partners who are oriented toward sexual bondage, and may

instead focus on other sexually attractive characteristics. The experience during sexual bondage might also be so intense that the need is low for additional sexual stimuli, such as a physically attractive partner.

### *Homosexuality*

In these messages where the subjects stated their sexual orientation, 18% were homosexual males and 11% were lesbian females. These figures are higher than in the general population, where probability studies have shown approximately 5–6% of adult males and 2–3% of adult females having engaged in same-sex activities at least once (Diamond, 1993).

These figures suggest that proportionately more homosexuals than heterosexuals are oriented toward sexual bondage. Individuals who have accepted one sexual variation in themselves might more easily accept desires for other sexual variations. Further, bondage and sadomasochism are part of the gay subculture, which gives lesbians and gay men an opportunity to discover a desire for sexual bondage.

The disproportionately high number of homosexuals might have other explanations. Homosexuals may be more willing to talk about their sexuality than heterosexuals, which has been observed by several researchers (e.g., Masters and Johnson, 1979). Some of our subjects had also observed that lesbians and gay men tend to have a high interest in computers, especially computer communication, which can partly be an effect of their need to communicate easily with other homosexuals. Studies have also shown that homosexuals tend to be overrepresented among the higher educated (Fay *et al.*, 1989; Weinrich, 1978), which can further have contributed to their overrepresentation among our subjects. There are also few news groups on the Internet/USENET where lesbians and gay men can talk openly about their homosexual orientation in an accepting environment, such as the *alt.sex.bondage* news group. This could further have contributed to the overrepresentation of homosexual subjects. The present finding must therefore be interpreted with caution.

### *Self-Identification*

Individuals oriented toward bondage and discipline must overcome many negative attitudes toward bondage. Being submissive is less socially desirable than being dominant, especially for men. Submissive-recipient men must also overcome the attitude that being submissive is unmanly. There are probably fewer negative attitudes against dominant women, and it is therefore likely that the self-identification process is easier for women

who desire the dominant-initiator role. The traditional roles of men as dominant-initiators and women as submissive-recipients are probably easier to understand for many people, as these roles fit their preconceptions. These roles, however, raise political concerns. The dominant male might be accused of abusing his partners, whereas the submissive female might be accused of preserving undesirable sex-role stereotypes. Many females also engage in bondage for other than sexual reasons, such as friendship, love, or money. This reduces their need to identify as an individual with variant sexual desires.

### Experiences of Sexual Bondage

*Play* (n = 60). It seems like sexually conventional individuals can expand through sexual bondage the number of sexual behaviors they desire. This is far from the common view of individuals who engage in paraphilic behaviors. Paraphiliacs are often regarded as particularistic in the sense that they are restricted in the number of sexual behaviors they desire. Although this may often be true, our results show that individuals who are not particularistic can use paraphilic behaviors, such as sexual bondage, to enlarge their repertoire of desirable sexual behaviors.

*Exchange of Power* (n = 19). The dominant-initiator can be sexually aroused by the experience of sexual power, control, and responsibility. One subject said: "It is a power trip because the active is responsible for the submissive's pleasure. Specially when the submissive is on the edge of climax." Such observations indicate that many dominant-initiators can only be aroused if the submissive-recipient enjoys the experience. This is far from the common view of dominant-initiators as cruel, selfish, and abusive.

*Intensified Sexual Pleasure* (n = 15). The submissive-recipient is relieved of the task to stimulate his or her partner and can focus all attention on the sexual experience, which is therefore intensified. The dominant-initiator can focus on his or her sexual performance without having to consider the physical movements of the partner, which may lead to intensified sexual pleasure. For other individuals, sexual bondage is necessary for attaining average sexual arousal. They might therefore perceive the experiences during sexual bondage as "intensified sexual pleasure" compared to conventional sexual behavior (often called "vanilla sex" in the language of the bondage subculture). Paraphiliacs tend to be sexually aroused by few stimuli. It is possible that such sexual stimuli have a higher stimulus potency to paraphiliacs than most sexual stimuli have to conventional individuals. Individuals oriented toward sexual bondage can therefore experience highly intensified sexual pleasure during bondage.

*Tactile Stimulation and Bodily Sensations* ( $n = 13$ ). Ropes, chains, and cuffs exert pressure that produces different pleasurable bodily sensations, which to the submissive-recipient enhances sexual arousal. Subjects often describe the intensity of the arousal as very high and the experience as very pleasurable. Some individuals even get orgasms without additional physical stimulation. Further research is needed about this experience and what mediates it.

*Enhancement of Visual Enjoyment of Partner* ( $n = 12$ ). The dominant-initiator can place and keep his or her partner in a position that is highly sexually arousing. The dominant-initiator can then enjoy the partner visually as long as he or she desires.

*Trust and Care* ( $n = 2$ ). The submissive-recipient experiences eroticized relief of all responsibility for the sexual experience and leaves this in trust to the dominant-initiator. The binding becomes the proof that the responsibility is in the hands of the dominant-initiator. These experiences support the psychoanalytic view of masochism that individuals use it as a strategy to be relieved from responsibility. One can argue, however, that the submissive-recipient never can be relieved of responsibility totally, as he or she is always responsible for behaving so that the sexual act will work out.

### **Disproportion Between Individuals Who Prefer the Dominant-Initiator and the Submissive-Recipient Roles**

#### *Heterosexuals*

In the messages only 4 heterosexual females preferred the dominant-initiator role, whereas 16 heterosexual males preferred the submissive-recipient role. These results support studies of male and female sexual fantasies, where researchers have found disproportions between active and passive males and females, which are similar to our findings. In real life this disproportion means that heterosexual males who prefer the submissive-recipient role often have difficulties to find heterosexual females who are dominant-initiators (Baumeister, 1988; Weinrich, 1987). One female subject said: "Being a TOP is not necessarily an erotic experience. There's a big shortage of female top wanna-bes." This situation has led to the emergence of the so called "dominatrix," professional females who satisfy the sexual needs of submissive-recipient males.

Estimates suggest there are about 2500 dominatrices in the United States (Scott, 1983), and there are reasons to believe that this phenomenon is not limited to the United States. It is controversial if dominatrices should

be regarded as prostitutes as many never have coitus with their clients and do not stimulate their clients' sexual organs manually. These dominatrices may instead tie up or chain their clients, spank, and whip them if they desire, and dominate or humiliate them orally. This might be sufficient to satisfy the client, or he may masturbate during the act. As clients enjoy being dominated by the dominatrix, this is one case where the "battered, denigrated woman" notion of professional sex, does not make much sense.

Among heterosexual female subjects, 89% of the messages expressed preference for the submissive-recipient role. These females can probably find a compatible male partner relatively easily, as many heterosexual males prefer the dominant-initiator role. In our material male heterosexual subjects expressed preference for the dominant-initiator role in 39 messages, whereas female heterosexual subjects expressed preference for the submissive-recipient role in 33 messages. These figures indicate a potential for good compatibility.

The political consequences are problematic. Traditionally, the female role has been submissive, which women's organizations have been fighting against. A woman who prefers a submissive-recipient role in sexual exchange may be regarded as politically incorrect by other women. It is therefore important to clarify that there is no evidence that preferred sexual roles usually carry over in preferred or actual social roles. Many sexually submissive men have dominant positions in society. Janus *et al.* (1977) found, to the researchers' surprise, a large number of masochistic sexual activity among successful politicians and other powerful figures. Prostitutes catering to such clients administered more sexual domination than any other sexual service or act.

### *Homosexuals*

All homosexual males except 1 preferred the submissive-recipient role. The only homosexual male who preferred the dominant-initiator role did so because he wanted to satisfy the sexual needs of his partner. This result corroborates earlier research that has found a gross disproportion between the number of homosexual males who prefer the submissive-recipient role and the dominant-initiator role (Innala and Ernulf, 1992; Weinrich, 1987).

The notion is controversial that most homosexual males, who are oriented toward bondage and discipline, prefer the submissive-recipient role. Versatility of roles is socially desirable in the gay community and in the gay B&D/S&M subculture. Members of this subculture tend to assert their versatility in role behavior. Paradoxically, they may all be right. Most ho-

mosexual males seem to function well sexually both as dominant-initiators and as submissive-recipients, although they *prefer* a submissive-recipient role. This preference seems to come through in the messages to the *alt.sex.bondage* list. More research is needed to study the difference between roles that homosexual males prefer and roles that they can take on, and function well in, although not preferring them.

## Other Aspects

### *Definitions*

There were different opinions among subjects whether B&D should be treated as part of S&M. Most messages that described sexual bondage did not describe suffering or bodily injury, the expected imagery of an audience meeting DSM-III-R criteria for sexual sadism or sexual masochism. Second, we know too little about the practitioners of bondage and their subculture to allow clear assessment of the sadomasochistic component of sexual bondage. Further, many subjects voiced strong opposition to being categorized with sadists and masochists. Thus, it appears most reasonable to treat these concepts separately. Similarly, it is reasonable to treat bondage as separate from dominance and submission.

There is a similar difficulty among researchers to find scientifically valid definitions of sexual bondage, dominance, and sadomasochism. Until more is learned about these phenomena, and their distinguishing characteristics, too precise definitions may be more confusing than enlightening.

### *Safety*

Bondage can be dangerous if practiced unsafely. Restraints can block airways and vessels, damage nerves, and cause other damage if a dominant-initiator is inattentive to the signals of a submissive-recipient. The partners often agree on a safe word or a sign, but a submissive can be so caught up in the act that he or she forgets to give these signs.

Health concerns were prominent in many messages, and it is a common observation that members of the B&D community are concerned about safety. Subjects reported that there are workshops about safety at community meetings, and strict safety standards exist among members. A member who breaks the rules of safety will often be expelled from the community.

## Methodological Notes

### *Computer Discussion Lists*

Analyzing discussions on Internet/USENET is an unobtrusive method of obtaining information about people's sexual desires and experiences. It is also a valuable tool for studying certain hidden populations. Results cannot be generalized to the population at large, since using a computer network requires certain types of equipment and computing skills. Sampling bias is also uncontrolled. Yet, these analyses serve as an explorative contribution to the understanding of sexual desires and experiences.

The willingness of individuals to discuss their sexual life on this type of computer list is stunning. The interaction with the computer seems to give individuals a feeling of relative anonymity, although the messages are broadcast to millions of presumptive readers around the world. Most individuals send their postings anonymously to the discussion lists, but a significant number of messages contain the real name or computer address of the poster.

## Further Research Needed

### *Dominant-Initiators*

Most research has studied submissive-recipient individuals, and this study also gives insight mainly in experiences of submissive-recipient individuals. There is therefore a need to learn more about the dominant-initiator. Specifically, we need to know if the experiences of dominant-initiators are mirror images of submissive-recipients or if these experiences are of a different character.

### *Social Class*

Socioeconomic status appears related to sexual orientation toward bondage. Male subjects from higher socioeconomic levels are overrepresented among the submissive-recipients. These data support the view that submissive-recipient behavior in sexual bondage is motivated by a desire to escape from exerting control and power. More research is needed to examine the influence of social class and to determine the causes of class differences. Observers have suggested that powerful individuals do not renounce their power as masochists, but tend to preserve their power role by controlling exactly what pain is to be inflicted upon them.

### *Personality Types*

Messages indicated that their authors preferred certain occupations and hobbies. It is too early to generalize, but whether there is a cluster of interests among individuals who belong to the B&D subculture needs to be explored.

Some researchers contend that the occurrence of one variant sexual behavior increases the probability of other variant sexual behaviors in the same individual. This contention needs to be explored.

### *Difficulties in Finding Partners*

Figures on the proportion of dominant-initiators and submissive-recipients indicate a compatibility problem. Submissive-recipient males, heterosexual and homosexual, have difficulties in finding compatible partners. How do they manage this situation? Is it sufficient that their partners are versatile enough to enact the dominant-initiator role, although it is not the preferred role of the partner? Or is a "real" dominant-initiator a more satisfying partner than a partner who enacts that role? Is a professional dominant-initiator a more satisfying partner than a partner who enacts that role for free? All these questions need to be addressed.

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