

Coming Out in the Age of the Internet: Identity “Demarginalization” Through Virtual Group Participation

Katelyn Y. A. McKenna
Ohio University

John A. Bargh
New York University

Internet newsgroups allow individuals to interact with others in a relatively anonymous fashion and thereby provide individuals with concealable stigmatized identities a place to belong not otherwise available. Thus, membership in these groups should become an important part of identity. Study 1 found that members of newsgroups dealing with marginalized–concealable identities modified their newsgroup behavior on the basis of reactions of other members, unlike members of marginalized–conspicuous or mainstream newsgroups. This increase in identity importance from newsgroup participation was shown in both Study 2 (marginalized sexual identities) and Study 3 (marginalized ideological identities) to lead to greater self-acceptance, as well as coming out about the secret identity to family and friends. Results supported the view that Internet groups obey general principles of social group functioning and have real-life consequences for the individual.

I just thought, “Oh God. What if they pick up that I’m gay?” It was that fear and shame. . . . I watched the whole Gay Pride march in Washington in 1993, and I wept when I saw that. I mean I cried so hard, thinking “I wish I could be there,” because I never felt like I belonged anywhere. —Ellen DeGeneres, *Time* magazine interview

A variety of motivations might explain why one identifies with a social group (e.g., Brewer, 1991; Deaux, 1996; Hogg & Abrams, 1993). Among the most prominently discussed motives are to gain self-esteem, to reduce uncertainty about oneself, and to fulfill the basic need to belong. For those with mainstream and culturally valued identities, opportunities for group identification are readily available. Yet for those who possess culturally stigmatized identities, especially identities that are concealable from others (Frale, 1993; E. E. Jones et al., 1984), this is not the case. Such stigmatized individuals are likely to quite

strongly possess all of these central motivations to belong to a group of similar others, but are unable to do so because of the concealable and potentially embarrassing nature of their identity.

For those with concealable and culturally devalued identities (e.g., people with epilepsy, former prison inmates, those with nonmainstream sexual interests or political views), it is not possible to look around and see others who are similar to oneself in this important way (Frale, 1993). Moreover, because of the potentially embarrassing nature of the self aspect, it is not easy to make the first move and disclose this aspect to others to find those who are similar. There are real risks to one’s important close relationships at home and at work in such self-disclosure (Derlega, Metts, Petronio, & Margulis, 1993, pp. 73–88; Pennebaker, 1990, chap. 9). Therefore, the individual feels isolated and different and is barred from the benefits of sharing with similar others.

The Emergence of Virtual Groups

Recently, however, a new variety of group has emerged that provides those with stigmatized identities an opportunity to share in the benefits of group membership. These *virtual groups* have developed on the Internet in the form of newsgroups. Today, over 30,000 different newsgroups exist, covering general as well as quite specific interests, among them topics that an individual would likely find embarrassing to reveal to others in real life.

The numbers of people participating in virtual groups is substantial and growing rapidly. Most North American households now own at least one computer, and over 40 million people are *on-line*, that is, connected to the Internet, able to send and receive electronic mail (E-mail), and able to read and post messages in newsgroups (Dowe, 1997). Worldwide, the number of people on-line is doubling every year, and estimates are that 10% of the world’s population will be on-line by the turn of the century (“Making a Business,” 1997).

In a recent book, Turkle (1995) argued that the emergence of the Internet has enabled the exploration of aspects of one’s

Katelyn Y. A. McKenna, Department of Telecommunications, Ohio University; John A. Bargh, Department of Psychology, New York University.

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Correspondence concerning this article should be addressed to Katelyn Y. A. McKenna, who is now at the Department of Psychology, New York University, 6 Washington Place, 7th Floor, New York, New York 10003. Electronic mail may be sent to mckenna@psych.nyu.edu.

identity that formerly had to remain hidden because of societal disapproval. In virtual groups, where people can be anonymous and do not deal in face-to-face interactions, individuals can admit to having marginalized, or nonmainstream, proclivities that they hide from the rest of the world. For the first time, they can reap the benefits of joining a group of similar others: feeling less isolated and different, disclosing a long secret part of oneself, sharing one's own experiences and learning from those of others, and gaining emotional and motivational support (Archer, 1987; Derlega et al., 1993; E. E. Jones et al., 1984).

The Nature of Marginalized Identities

Brewer (1991) argued that an individual has the need to feel connected to others, to have a sense of group belonging, and to feel like a special, valued member of a group. Therefore, feeling different from the membership of a valued group (such as mainstream society) is problematic for the individual, in that certain aspects of identity may need to be hidden in order to achieve group acceptance and approval. Such conflicts between the public persona and the private self, argued Horney (1946), are the major cause of unhappiness and neuroses.

In an insightful analysis of marginalized identities, Frable (1993) distinguished between those that are *concealable* and those that are *conspicuous* to others. Whether an individual is able to keep the stigmatized identity from others has several important psychological ramifications. First of all, unlike persons with conspicuous stigmas (e.g., obesity), those with hidden conditions are not able to see similar others in their environment, so there is no visible sign of others who share the stigmatized feature. Second, those with a concealable stigma are more likely to hear the negative comments and opinions of others concerning the stigma than are those with conspicuous marginal statuses. People are more likely to express negative opinions about a social group to a person they do not know is a member of that group. Hearing such opinions is likely to reinforce the negative effect of the marginalized identity on the individual's self-esteem.

Consequently, people with visible stigmas are able to see that there are similar others and so do not feel so unique or alone, but people with concealable stigmas cannot and so tend to feel more different from other people. Frable (1993) confirmed this prediction in two studies. In one, participants with qualities that were culturally stigmatized but concealable (e.g., people with epilepsy, incest survivors) showed a considerably reduced tendency toward false consensus compared both to participants with a culturally valued or conspicuous condition (e.g., obesity, a visible scar) and a nonmarginalized identity control condition. Those with concealable marginal identities were the least likely to feel that others shared their preferences for mundane items such as ham salad sandwiches. In the second study, participants with concealable cultural stigmas endorsed as self-descriptive more items related to uniqueness (e.g., *rare*, *outsider*) than did other participants.

Motivational Bases for Identifying With a Virtual Group

In Tajfel's (1982) original model of social identity, the central motivational impetus for identifying with a social group was

the gain in self-esteem the identification brought (Deaux, 1996; Hogg & Abrams, 1990). A person continued to be a group member so long as the group added positive features to the person's social identity. Hogg and Abrams (1990, 1993) argued that self-esteem is not the only motivation possible for group identification: uncertainty reduction, power, self-efficacy, and greater self-knowledge are others. Other researchers have since pointed to still another motivational basis, a basic need to belong (Baumeister & Leary, 1995; Brewer, 1991).

All of these motivations for group identification are likely to be operative—and strongly so—for the person with a marginalized and concealable identity. First, the primary need to belong to the society at large is frustrated to the extent the individual feels different from others. Second, in the absence of a visible set of others with whom to compare him- or herself, the individual is likely to be uncertain about this important aspect of identity and will be motivated to reduce this uncertainty (see Archer, 1987; Hogg & Abrams, 1993). Third, the general motive to hold a positive self-image (e.g., Sedikides, 1993) is thwarted by including this negative group identity. Thus, attempts to connect with others who share that identity and do not view it negatively will figure prominently in efforts to reduce the stigma and thereby increase self-esteem (E. E. Jones et al., 1984, p. 133).

Identity Importance and Self-Esteem

But suppose a stigmatized individual finds an Internet news-group where others with the same stigmatized identity post messages that share relevant personal experiences and convey identity-enhancing attitudes and beliefs. Identifying with this virtual group alone may still not be enough to produce positive changes in self-esteem and greater acceptance of this aspect of self.

Deaux and her colleagues have argued for the role of involvement in the group or the subjective importance of the identity as a mediator of the benefits of identification on self-esteem (e.g., Bat-Chava, 1994; Deaux, 1996; Ethier & Deaux, 1994). According to Tajfel's (1982) theory, incorporating the group identity into one's social identity is sufficient to increase self-esteem. However, Deaux (1996, p. 793) has demonstrated that unless individual differences in the importance of the identity are taken into account, the effect of identification alone is negligible.

For instance, in Ethier and Deaux's (1994) study of first-year university students who held the Hispanic identity, the strength of ethnic identification was positively related to participation in Hispanic cultural groups and activities, as well as to individual self-esteem. Ethier (1995) further showed that variations in the importance of the mother identity were related to differences in the amount of time that new mothers spent taking care of their babies. Further, Bat-Chava (1994) found no overall relationship between identification as a deaf person and self-esteem; only when the identity was important to the individual (as determined by the amount of involvement in the deaf community) was there an increase in self-esteem.

Why Disidentification Is Not an Option

If the stigmatized identity is concealable, why doesn't the individual just remove this aspect of identity? After all, ac-

cording to Tajfel (1982), if a group identity contributes negatively to self-esteem, an individual then no longer identifies with that group. However, in their treatment of social stigma, E. E. Jones et al. (1984) described several reasons why concealable negative identities cannot be so easily discarded. Principally, the person feels guilt at keeping a secret from his or her spouse, family, and close friends; and infers from his or her concealment behavior that this aspect of self must be shameful (see Derlega et al., 1993, p. 95). This creates a vicious cycle that increases the vigilance against revealing this identity. Yet the great and continuous effort exerted to keep these secret aspects from public view causes the individual to continuously focus on those very aspects, keeping them in mind as a salient part of self-definition. Having to remain vigilant against revealing negative self-features does not permit the person to forget about or de-emphasize this aspect of identity—quite the contrary. Research by Wegner and his colleagues (e.g., Wegner, 1994; Wegner & Erber, 1992) on ironic effects of mental control attempts has documented such consequences. To guard against revealing a secret aspect of self, one must keep the secret continually in mind (as what not to say, talk about, or reveal). The side effect of this vigilance is to make the taboo topic more accessible in memory than if the suppression attempts had never been made.

A Process Model of "Demarginalization"

Given that "leaving the field" is not an option and that the stigmatized identity is likely to continue as a very salient component of the self, the individual remains highly motivated to identify with a group of similar others. Thus, we hypothesized that people with concealable stigmatized identities would be more likely to become involved in Internet newsgroups and would consider membership in such virtual groups to be more important to their lives than would people with marginalized—

conspicuous and mainstream identities, as indicated by their behavioral reactions to evaluative feedback from other group members. This prediction was tested in Study 1.

Studies 2 and 3 tested a process model of identity demarginalization (see Figure 1). The dependent variables in both studies were the degree of self-acceptance of the marginalized identity and the revelation of this formerly secret part of the self to close others. Recent response time evidence reported by Smith and Henry (1996) bolstered the axiom of social identity theory that social group memberships are incorporated into the psychological self to the extent that the individual feels like a member of the group (i.e., it has become an in-group for that person). Thus, to the extent that newsgroup participation leads to stronger group identification, the individual should come to accept this identity as part of, instead of distinct from, his or her self-concept. Study 2 focused on marginalized sexual interests and identities. Study 3 replicated Study 2 but surveyed members of newsgroups concerned with marginal political views and ideologies.

On the basis of the work by Deaux and her colleagues, we hypothesized that among the people who identify with a marginalized social group via the Internet, those who participated actively in that group would benefit more in terms of self-acceptance and self-esteem than those who do not. Whereas group participation and identity importance are more or less reciprocally linked in Deaux's model, we posit a directional Participation → Importance relation. In contrast to the groups studied by Deaux and her colleagues, such as Hispanics and new mothers, in which one is a de facto member of the group according to objective criteria, the only way that people with concealable marginalized identities can belong to the group is by participating in it. In other words, one must join the group prior to any gains in the importance of the group to one's social identity.

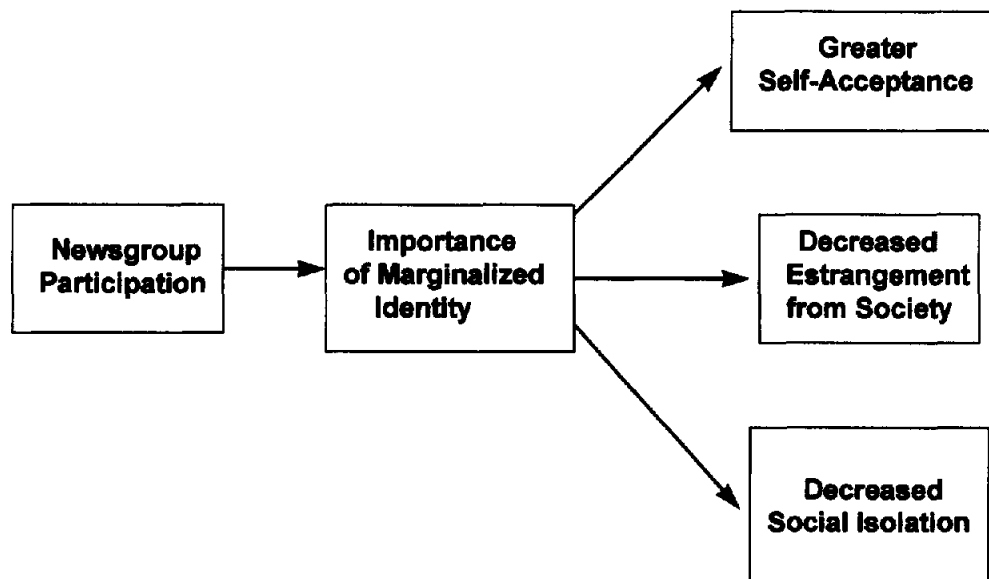


Figure 1. A process model of identity demarginalization.

This is the only way that the other group members can know about one's membership in the group. Wicklund and Gollwitzer (1982) have discussed and shown how group memberships do not become psychologically real until the person makes them a social reality, that is, by having others notice and acknowledge one's membership in the group.

Moreover, this greater self-acceptance or demarginalization of the identity was expected to cause the individual to be more likely to come out about the identity to those people in real life whose opinions matter most to him or her, such as family and friends, as individuals are motivated to make their important identities a social reality, instead of just a private affair (Gollwitzer, 1986). Finally, membership in the marginalized newsgroup should reduce the individual's feelings of being different from others (see Frable, 1993) and so should also reduce the person's estrangement from society and feelings of social isolation.

To distinguish between those who become actively involved in a virtual group and those who do not, we took advantage of the fact that newsgroups are composed of two types of members, those who post, providing the reading material for others, and those who "lurk," simply reading the material posted by others.¹ Some of the lurkers will eventually "delurk" and become posters themselves, whereas others will remain in the shadows (see S. G. Jones, 1995).²

Study 1: Degree of Involvement in Marginalized Versus Mainstream Virtual Groups

The present study assessed whether there are differences in the ways that participants in mainstream versus marginalized-conspicuous and marginalized-concealable newsgroups respond to feedback from others. Because those who post in newsgroups concerned with marginalized-concealable stigmas have few, if any, venues to express this part of themselves, the opinions of others within their newsgroup should be of greater importance to them than to posters in either mainstream or marginalized-conspicuous newsgroups. Therefore, we predicted that the positivity of the responses to posters in the concealable-stigma groups would have a greater effect on their subsequent posting behavior. It also follows from the hypothesis of greater group importance that there should be a higher overall frequency of posting per person in marginalized-concealable versus mainstream or marginalized-conspicuous newsgroups.

Method

Sampling of newsgroups. Twelve newsgroups were selected for study: four mainstream, four marginalized-conspicuous, and four marginalized-concealable newsgroups. With one exception (*soc.support.fat-acceptance*), all belonged to the alt. newsgroup hierarchy.³ At the time of the study, there were approximately 650 alt. newsgroups. This number was reduced by eliminating "binary" newsgroups (in which mainly pictures are posted) and personals newsgroups (which are similar to the personal advertisement sections of magazines and newspapers). The newsgroup sample population was further restricted to those in which there were at least 100 posts per week to ensure there would be sufficient data for analysis.⁴ This left a final population of 53 newsgroups.

Four of these newsgroups concerned visible stigmas that are generally recognized as undesirable and "marked" conditions (see Frable, 1993; E. E. Jones et al., 1984): obesity (*soc.support.fat-acceptance*), stuttering (*alt.support.stuttering*), cerebral palsy (*alt.support.cerebral-palsy*), and baldness (*alt.baldspot*). This set of newsgroups thus represented marginalized but conspicuous identities.

Next, to determine which of the remaining newsgroups represented marginalized concealable identities and which represented mainstream (nonsigmatized) interests, we first divided the list of 53 newsgroups on the basis of whether the average person would be unwilling to post in the newsgroup using his or her real name because of potential discovery and embarrassment. We included the names of the 15 potential marginal newsgroups and 10 potential mainstream newsgroups on a list that we then posted to 5 highly trafficked mainstream newsgroups (e.g., *alt.cooking.recipes*). In this post, we asked potential respondents to mark those groups on the list in which they would be unwilling to post using their real name and to send this list back to us via E-mail. We received 55 responses. There was substantial agreement as to which newsgroups were culturally stigmatized and which were mainstream. From the newsgroups marked by over 90% of respondents, four were randomly selected to be our sample of marginalized newsgroups: *alt.drugs*, *alt.homosexual*, *alt.sex.bondage*, and *alt.sex.spanking*. (Consistent with these findings, Pennebaker [1990, chap. 9] detailed the social censure faced by homosexuals and people with deviant sexual interests and the resultant stress they endure keeping it secret.) Four mainstream groups were randomly selected from those marked by less than 5% of the respondents: *alt.culture.us.1970s*, *alt.parents-teens*, *alt.politics.economics*, and *alt.tv.melrose-place*.

Coding of posts. A content analysis was conducted on all original posts in these 12 newsgroups, as well as on the follow-up responses to each original post, made during a 3-week period. Together, an original post and those made in response to it are known as a "thread."⁵ So that only posts relevant to the topic of the group were analyzed, threads

¹ In view of the seemingly pejorative undertone of the label *lurker*, we should point out that it is not our term but instead the standard term among newsgroup members for those who read but do not post. The term is rarely used in a disparaging manner, especially in marginalized newsgroups. Posters in such newsgroups are usually highly aware of the potentially negative consequences of "going public" (see Kelly & McKillop, 1996) and so can understand the choice to remain a lurker. Moreover, lurkers themselves typically title their own first post a "delurk."

² We know of no previous study comparing newsgroup lurkers and posters, and so little is known as to why some individuals are more likely to remain nonparticipant lurkers. We can, however, offer some possibilities. First, it may be that lurkers are less likely to have anonymous Internet accounts (where a pseudonym is used instead of the person's real name). Second, in our discussions with newsgroup members, it seemed that lurkers were just more shy in general and more worried about the evaluative reactions of other members should they post compared with those who do post.

³ These are among the most popular newsgroups for the average user, as they require no special expertise or knowledge (the comp. newsgroups, for example, are frequented mainly by those with an in-depth interest and knowledge of computer science).

⁴ This number includes only the posts specifically directed to that particular newsgroup (with content relevant to the interest of the newsgroup) and does not include advertisements that are simultaneously cross-posted to a large number of newsgroups (known as *spam*).

⁵ Responses to an original post are easily identifiable by their subject headers, which begin with "Re:" and are followed by the subject header of the original post.

cross-posted to more than three groups were not coded, nor were any personals or advertisements. We chose a time period of 3 weeks because there is often a delay of as much as 4 days before a given post reaches all the available newsgroup servers, and responses to those posts may occur over as much as a 10-day period.

Responses to each original post were coded by four judges (blind to the research hypotheses) as either positive, mixed (containing both positive and negative elements), or negative in evaluative tone. A total of 485 threads were coded, each consisting of one original post and an average of three responses (for a total of 1,888 posts). Postings in the marginalized-concealable newsgroups (236 threads) outnumbered those in the mainstream (97 threads) and marginalized-conspicuous (152 threads) newsgroups. To establish intercoder reliability, 30 threads (10 marginal-concealable, 10 marginal-conspicuous, 10 mainstream) were randomly selected and coded by all four coders. Intercoder agreement was quite high at 97%.

The dependent variable was the frequency with which the original poster continued to post over the 3-week period, following the feedback regarding his or her original post.

Results

For each thread, the positivity of posted responses was the number of positive minus the number of mixed and negative responses combined. Mixed and negative responses were grouped together because of the statistical rarity of exclusively negative responses (less than 0.4 per thread). Thus, the positivity index reflected the extent to which there were more (or less) exclusively positive posts than posts containing at least some criticism.

Posting frequency. A simultaneous regression analysis was then conducted, with total posts per poster being the dependent variable and newsgroup marginality (coded as mainstream = -1, marginal-conspicuous = 0, and marginal-concealable = 1) and positivity of feedback being the predictor variables. Consistent with the hypothesized greater importance of marginalized-concealable newsgroups to their members, a significantly greater number of posts per person was found in the marginal-concealable ($M = 5.5$) than in either the marginal-conspicuous ($M = 2.8$) or the mainstream ($M = 1.9$) newsgroups: $\beta = .18$, $t(481) = 4.03$, $p < .0001$. (Note that because these means reflect the number of posts per author, they are already adjusted for the total numbers of posts and authors in the various newsgroups.) Planned comparisons confirmed that the marginalized-concealable newsgroup members were reliably more frequent posters on average compared to posters in the other two newsgroups combined, $F(1, 482) = 32.33$, $p < .0001$. There was no reliable difference in posting frequency between the marginalized-conspicuous and mainstream newsgroups, $F(1, 482) = 1.42$, *ns*.

Responsiveness to feedback. The main effect for feedback positivity was not reliable: $\beta = .07$, $t(481) = 1.58$, $p = .12$. Thus, overall the positivity of group feedback did not modify the poster's subsequent behavior. However, there was a reliable Newsgroup Marginality \times Feedback interaction: $\beta = .23$, $t(481) = 4.82$, $p < .00001$. As predicted, the group feedback influenced the member's subsequent posting behavior only in the marginalized-concealable newsgroups (see Figure 2). The correlation between positivity of feedback and subsequent posting frequency was $r = .38$ ($p < .001$, two-tailed) for the margin-

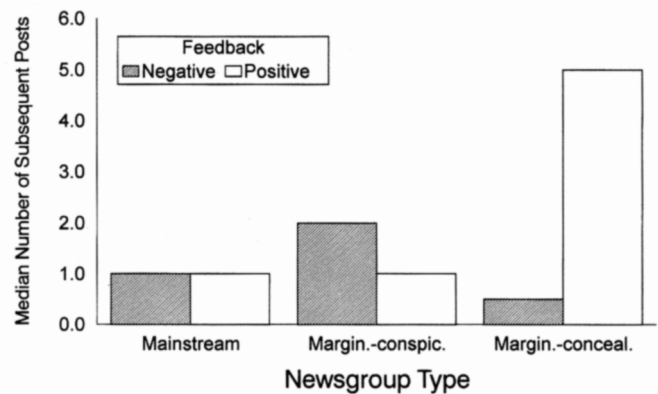


Figure 2. Effects of feedback from newsgroup members on participants' subsequent posting behavior (Study 1). Margin.-conspic. = marginalized-conspicuous; margin.-conceal. = marginalized-concealable.

alized-concealable newsgroups but was negligible and nonsignificant for the marginalized-conspicuous ($r = -.07$, $p > .25$) and mainstream ($r = .17$, $p = .11$) newsgroups.

Newsgroup demographics. Because people self-selected themselves into the three types of newsgroups, it is important to rule out alternative explanations for the observed effects in terms of demographic differences between newsgroup members. It could be, for example, that those who participate in the marginalized-concealable newsgroups are primarily teenage males, whereas those who participate in the mainstream groups are mainly middle-age females. If so, our obtained differences in posting frequency and responsiveness to group feedback might be due to factors other than the relevance of the newsgroups to marginalized identities.

Accordingly, we tracked each newsgroup for several additional days and coded all posts revealing the gender and age of the poster. Age was obtained mainly through delurk posts, in which a person typically includes a brief self-description, but we noted age whenever a poster mentioned it. Gender was deduced principally from the poster's first name, excluding any ambiguous names. A given poster contributed only once to this set of data, not each time he or she posted.

The three types of newsgroups showed similar demographic features. Age was the most infrequently mentioned feature (57 times across all newsgroups), but the available ages for posters across the three newsgroup types were comparable, with a mean of 37 years for the mainstream groups, 39 years for the marginalized-concealable groups, and 34 years for the marginalized-conspicuous groups. However, because of the difficulty in obtaining age information from posts, we asked about age (and gender) in the two survey studies that follow (Studies 2 and 3). As can be seen in Table 1, those results confirmed that the mean age of concealable-marginalized newsgroup members was in the mid-30s.

Gender was more readily available information, derivable from the posts of 315 individual posters. The mainstream group posters were 67% male, the marginalized-conspicuous groups were 63% male, and the marginalized-concealable groups were 64% male. Again, the types of groups consisted of comparable

Table 1
Comparison of Mean Survey Responses by Marginalized Sexual (Study 2) and Ideological (Study 3) Newsgroup Members

Dependent measure	Type of marginalized identity		<i>t</i>
	Sexual	Ideological	
Age (years)	37	34	<1
Percentage male	61	83	3.42***
Time reading newsgroup (in months)	18.2	14.5	1.81†
Time posting (in months; posters only, <i>df</i> = 159)	14.4	14.1	<1
Importance (1–7) to self of Newsgroup	4.8	4.0	3.05***
Members' opinion of self	3.8	2.9	3.09***
Interacting with group	4.6	3.9	2.45***
Time per day in group (1–4)	2.1	2.0	<1
Self-acceptance due to newsgroup (1–7)	4.5	3.5	3.43****
Percentage who came out	37	63	3.64****
Social isolation index (1–5)	2.4	2.2	1.64†
Estrangement index (1–4)	1.6	1.7	1.16

Note. For all comparisons except time posting, *df* = 225.

† *p* < .10 (marginally significant). *** *p* < .01. **** *p* < .001.

proportions of men and women. Finally, it was also possible to check the domains from which the posts and threads that had served as the data for Study 1 originated. (Domains are indicated by the final extension on an electronic address, such as “.edu” for academic locations in the United States and “.com” or “.net” for commercially provided addresses.) The great majority of posts—over 80%—in all newsgroups were from commercial accounts (.com and .net), which represent a much broader demographic range of participants than do academic (.edu) accounts. Thus it was not the case that posters in one or the other type of newsgroup came predominantly from academic locations (which are characterized by several demographic differences in comparison with posters from commercial domains, such as level of education and computer literacy). In sum, it seems unlikely that demographic differences were responsible for the results of Study 1.

Discussion

We hypothesized that because their concealable stigmatized identity does not make the benefits of group membership easily available elsewhere, as compared with people with mainstream or marginalized-conspicuous identities, those with marginalized-concealable identities would identify more strongly with relevant Internet newsgroups and would consider such groups to be more important to their identity. As Internet newsgroups are the virtual or “cyber-equivalent” of nonelectronic groups, such as ethnic campus or deaf-adult organizations, we indexed the importance of newsgroup identity, as did Ethier and Deaux (1994) and Bat-Chava (1994), by the degree of the individual's involvement or participation in the group. Because one partici-

pates in virtual groups by posting messages and responses, we predicted that members of marginalized-concealable newsgroups would post more per person overall than would members of mainstream or marginalized-conspicuous newsgroups. Similarly, we also hypothesized that the (positive or negative) feedback given to members of marginalized-concealable newsgroups by other members of the group would matter more to them than it would to members of the other types of newsgroups, and thus the feedback would show a greater impact on the marginalized-concealable newsgroup members' subsequent posting behavior. The results of our study of posting behavior in 12 Internet newsgroups, comprising an analysis of nearly 1,900 posts, confirmed both predictions.

The results of Study 1 established that virtual groups do matter to individuals with marginalized-concealable identities, more so than they matter to those with visible stigmas or mainstream identities. Studies 2 and 3 were conducted to assess the consequences of participating in marginalized virtual groups for an individual's self-esteem and acceptance of that aspect of his or her identity. Study 2 was conducted with individuals who post and read posts in newsgroups dealing with concealable-marginalized sexual orientations, whereas Study 3 replicated Study 2 with individuals who post and read posts in newsgroups concerning concealable-marginalized ideological orientations.

Study 2: Demarginalization of Sexual Identities

In this study, we examined whether individual differences in virtual group involvement were related to differential gains in self-esteem and self-acceptance and reduced social isolation. Whereas we assumed (and here tested) that all newsgroup members share the stigmatized identity, our major hypothesis was that posters, because of their greater group involvement, would find the group more important to their identity and, consequently, feel greater self-acceptance and less estrangement from society than lurkers. We further predicted that this reconciliation of the private, marginalized identity with the public self would cause people to be more likely to come out about this identity to their real-life family and friends.

Method

Respondents. From the set of marginalized newsgroups determined by the initial survey in Study 1, the three most popular newsgroups dealing with marginalized sexual identities (in terms of numbers of posts) were selected to be the focus of Study 2: *alt.homosexual*, *alt.sex.bondage*, and *alt.sex.spanking*. The survey sample consisted of posters and lurkers.

Measures. To ensure that members of these newsgroups felt marginalized in this aspect of their identity, we first asked all respondents to rate how embarrassed they would be if this aspect of their identity were to be revealed to those around them (i.e., if they were “outed”). This rating was made on a 3-point scale, from *not at all embarrassed* (1) to *extremely embarrassed* (3). Participants were also asked to rate, on a 7-point scale (1 = *not at all*, 7 = *very much*), the extent to which they felt society as a whole attaches a stigma to the aspect of identity covered by the newsgroup.

The remainder of the survey contained 17 items designed to assess the relationship among (a) involvement in the group (i.e., participation: poster vs. lurker), (b) the importance of the newsgroup to identity, (c)

feelings of social isolation, and (d) self-acceptance of (and coming out about) the marginalized identity. We strove to keep the questionnaire brief to encourage a high response rate (i.e., reducing the time burden on our volunteer respondents).

Four questions addressed the importance of newsgroup membership to the respondent's social identity. On response scales ranging from *not at all important* (1) to *very important* (7), respondents rated how important the newsgroup was to them, the importance they placed on interaction with other members of the newsgroup, and the importance they placed on the way other members of the newsgroup perceive them. The final item related to importance was the amount of time per day the respondent spent reading, posting, or both in the newsgroup, which was rated on a 4-point scale ranging from *0 to 15 min* (1) to *more than an hour* (4). Responses to each of these four items were first standardized and then averaged to compose the importance index (see *Structural equation modeling procedure* for the rationale behind using this index variable).

In order to measure the level of social isolation, or feelings of being different from others, three items were included. The first came from Dean's (1961) Social Isolation Scale: "Sometimes I feel all alone in the world." The remaining two were taken from the General Alienation Scale of Jessor and Jessor (1977): "I sometimes feel uncertain about who I really am" and "Most people don't seem to accept me when I am just being myself." Responses to each item were made on a 5-point scale ranging from *strongly disagree* (1) to *strongly agree* (5). To create the social isolation index, scores on each scale were first separately standardized and then averaged.

The final dependent variable was the individual's feelings of estrangement from society. This was conceptualized as a variable distinct from social isolation because several previous studies have found little or no correlation between isolation-alienation and estrangement (see Robinson, Shaver, & Wrightsman, 1991). We used three of the four items from the Cultural Estrangement Scale of Kohn and Schooler (1983), which assesses the extent to which an individual rejects or feels removed from the dominant social values. (There were many missing responses on the item concerning shared religious background.) The respondent answered either *rarely* or *frequently* to the following three items: "According to your general impression, how often do your ideas and opinions about important matters differ from those of your relatives?" "How often do your ideas and opinions differ from those of your friends?" and "How often do your ideas and opinions differ from those of most people in your country?" Each scale was standardized prior to the average being taken to constitute the estrangement index.

The self-acceptance index was based on two additional questions that concerned the degree to which belonging to the newsgroup had enabled the respondent to accept the marginalized identity as part of him- or herself. On a 7-point scale, the respondent rated the extent to which he or she had come to accept this aspect of identity as a direct result of the newsgroup. Coming out was measured by whether or not a respondent had told friends and family about this marginalized aspect of his or her identity, again as a direct result of the newsgroup (*yes* or *no*). We had originally intended to create a single self-acceptance index by averaging these two scores (after standardization); however, the coefficient alpha obtained was insufficient to justify this index (see *Results and Discussion*), and the two measures were treated as distinct outcome variables in the structural equation model.

The questionnaire also included five questions regarding the respondent's age, gender, country of origin, length of time reading the newsgroup (in months), and length of time posting in the newsgroup (in months).

Procedure. To include both posters and lurkers in the survey, we used two different methods of obtaining responses. Posters can be identified and reached through their E-mail addresses, which appear in the

articles they post. Over a 3-week period (which was 6 months after the completion of Study 1), questionnaires were E-mailed to everyone who posted in the selected newsgroups ($N = 160$). As in Study 1, we excluded from the sample those whose posts were cross-posted to three or more newsgroups and posters of advertisements.

Because there is no way of knowing who is reading but not posting to a newsgroup, lurkers cannot be identified and contacted directly. Thus, in order to reach them, a copy of the questionnaire was posted in each of the three newsgroups, requesting lurkers to complete and return the survey. The questionnaire was reposted every 3 days over the 3-week period.

Results and Discussion

Sample characteristics. Of the 160 questionnaires sent to posters, 103 were completed and returned, for a 64% response rate. A total of 49 lurkers responded to the posted questionnaire, for a total sample size of 152. The sample was composed of 92 men and 58 women. The age of respondents ranged from 18 to 68, with the average age being 37 years (see Table 1). Posters had generally been reading posts in the newsgroup longer ($M = 19.5$ months) than their lurker counterparts ($M = 15.6$ months).

Feelings of marginalization. The mean rating of how embarrassed the respondent would be if others found out about his or her particular interest was 1.9 on the 3-point scale ($N = 124$), with a 95% confidence interval of 1.80 to 2.04. Thus, the respondents generally reported moderate embarrassment concerning their interest in the newsgroup. They also endorsed the belief that society stigmatizes their sexual preference, with a mean of 5.3 on the 7-point scale (95% confidence interval of 5.1 to 5.5). It is important to note that posters and lurkers produced nearly identical means on both questions; both t s < 1 . These results serve as a manipulation check on our classification of these newsgroups as representing marginalized aspects of identity.

Creation of indexes. The four items related to the importance of the newsgroup to the respondent's identity were significantly intercorrelated (average $r = .54$, all p s $< .001$). The more important the newsgroup was to the respondent, the greater was the importance of interacting with the other members; likewise the more the respondent cared about the way he or she was perceived by other members of the newsgroup, the more other members' opinions of the respondent mattered to him or her and the more time the respondent spent per day in the newsgroup. The importance index had an associated reliability coefficient (Cronbach's alpha) of .81.

The three items constituting the social isolation index also intercorrelated at an acceptable level (average $r = .34$, all p s $< .001$), as did the three items making up the cultural estrangement index (average $r = .28$, all p s $< .001$). The coefficient alphas for the social isolation index (.60) and estrangement index (.54) were modest but above the level considered sufficient for basic research by Nunnally (1967, p. 226). It should be noted as well that these are standard measures of isolation and estrangement, that have been used in many prior studies of these concepts.

The items involving self-acceptance of the marginalized identity and the extent to which the individual had come out to his or her close friends and family as a direct result of the newsgroup did not intercorrelate sufficiently to be combined into a single

Table 2
Correlations Among Outcomes Variables in Studies 2 and 3

Variable	1	2	3	4
1. Self-acceptance	—	.33*	-.06	.04
2. Coming out	.15	—	-.30*	.13
3. Estrangement	-.16*	-.04	—	.28*
4. Social isolation	.11	.05	.22*	—

Note. Values below the diagonal correspond to Study 2 ($N = 152$); values above the diagonal correspond to Study 3 ($N = 77$).

* $p < .05$.

index: $r = .15$, $p < .04$, coefficient $\alpha = .24$. Therefore, they were treated as separate outcome variables in the structural equation model.

Structural equation modeling procedure. To test the hypothesized mediational model of identity demarginalization, we conducted a structural equation modeling analysis of the relations between participation in the newsgroups (lurker vs. poster), importance of group identity, self-acceptance, coming out, estrangement, and social isolation. Correlations among the four outcome variables can be found in the left half of Table 2, and these low values confirm that the variables are tapping separate aspects of experience.

The model tested is shown in Figure 3. Several aspects of the modeling procedure should be noted. First, a saturated model was estimated such that all possible paths were included (paths not shown were nonsignificant at $p > .25$) and the disturbances in the outcomes were free to covary. In other words, our estima-

tion procedure permitted any direct effects of participation (i.e., those not mediated by identity importance) to emerge. Second, identity importance is included as an index variable instead of as a latent variable represented by the four separate importance-related items because those four items were related to the outcome variables in unique ways as well as through the variance the items share. For example, three of the four importance-related items had a small negative correlation with social isolation, but the time per day variable showed a small positive correlation. This violates an assumption that latent variables' separate indicators point to the outcome variables in a similar fashion; consequently, the latent variable version of the model fit the data poorly. In any event, the results of the latent variable analysis were highly similar to those shown in Figure 3.

Participation and identity importance. The outcome of the structural equations analysis strongly supported the hypothesized model. First, as predicted, the importance of the newsgroup to the respondent's identity was substantially greater for those who participated actively in the group (i.e., posters) than for those who only read the posts (i.e., lurkers). Posters found the newsgroup itself and interaction with other members of the newsgroup to be more important to their lives (see Table 3) than lurkers did. Posters spent more time per day in the newsgroup, and the way the posters were viewed by other members mattered more to them. However, lurkers were mainly left out of this first and crucial part of the demarginalization process.

To ensure that the effect of active participation in the marginalized group on identity importance was not attributable merely to the tendency of posters to have been group members (reading the newsgroup posts) longer than have lurkers, we performed

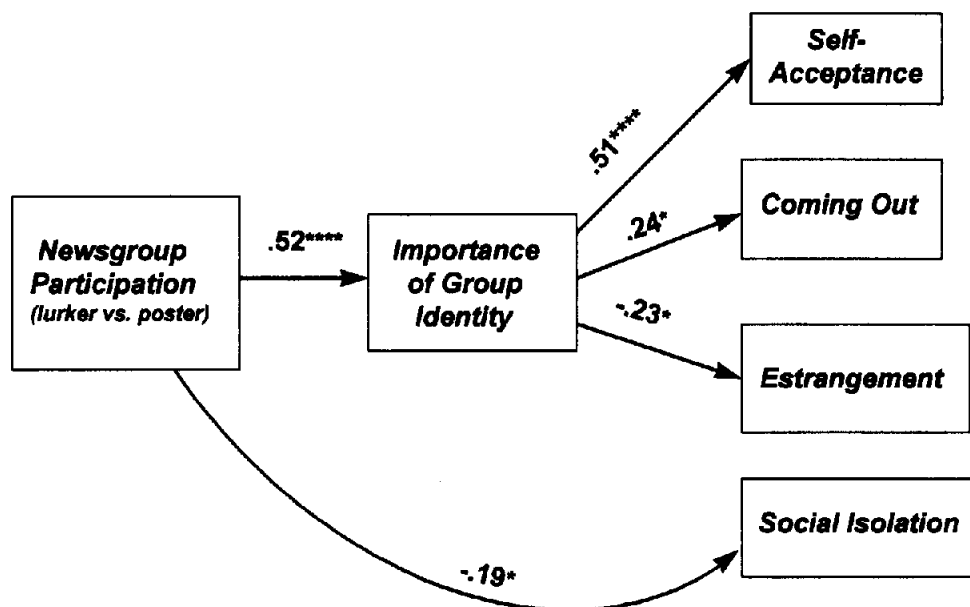


Figure 3. Demarginalization of sexual identities (Study 2): Structural equation model of the relations between group participation, importance of group identity, self-acceptance, disclosing the identity to close others, social estrangement, and social isolation. Absolute values of all omitted paths $< .13$. * $p < .05$. **** $p < .001$.

Table 3
Means of Dependent Variables of Studies 2 and 3 by
Participation Status (Lurker vs. Poster)

Dependent measure	Lurker	Poster	<i>F</i> (1, 225) ^a
Importance index (standardized)	-0.7	0.3	48.38****
Newsgroup to self (1-7)	3.9	4.8	
Interaction with members (1-7)	2.8	5.0	
Members' opinion of self (1-7)	2.7	3.8	
Time per day in group ^b	1.6	2.3	
Self-acceptance due to newsgroup (1-7)	3.8	4.3	5.59**
Percentage who came out	36	49	3.17††
Estrangement index (1-2)	1.7	1.6	1.21
Social isolation index (1-5)	2.4	2.2	3.29††

^a None of these main effects of participation varied as a function of type of newsgroup studied (i.e., Study 2 vs. Study 3); all interaction *ps* > .21. ^b Scale values for time per day spent in newsgroup were as follows: 1 = 0-15 min, 2 = 16-30 min, 3 = 31-60 min, 4 = more than one hour per day.

†† *p* = .07 (marginally significant). ** *p* = .02. **** *p* < .001.

the following subsidiary analyses. First, how long lurkers had been reading the newsgroup posts had no relation to the importance index ($r = -.06$, $p > .25$), nor did the length of time posters had been reading the newsgroup matter to its importance for their identity ($r = .06$, $p > .25$). However, for posters, the length of time posting in the newsgroup did predict newsgroup importance ($r = .31$, $p < .001$). Thus, for posters it was the subset of time they had participated, and not the total time they had been reading the newsgroup posts, that mattered for identity importance. The conclusion that can be drawn from the data supports the proposed model: Not only is the group identity more important for those who participate than for those who lurk, but also the longer one has participated, the greater the importance of the group identity.

This result is also important in that it supports the causal direction in our model from participation to identity importance, instead of the other way around. It is highly unlikely that higher levels of identity importance could produce longer newsgroup participation. The latter is mainly a function of how long the individual has been connected to the Internet; some came on-line earlier than others (e.g., in 1993 rather than 1995). From our discussions in these newsgroups during data collection, it is clear the respondents did not know about the existence of their particular newsgroup (or even Internet newsgroups in general) prior to gaining access to the Internet. Thus, it must be the case that increasing the amount of time participating in the newsgroup increases the importance of that identity for the individual.

Consequences of identity importance. The next step of the model calls for identity importance to mediate between group membership and its benefits. Figure 3 shows that the more important was the marginalized identity, the greater was the self-acceptance of the identity, the more likely was the individual to share this new social identity with family and friends, and the less estranged from society the person felt. These effects are in harmony with Deaux's (1993, 1996) postulated mediational

role of identity importance for the positive effects of group membership on the self-concept and for the behavioral consequences of group identity.

The lack of reliable direct paths between participation and self-acceptance, coming out, and estrangement further demonstrated that it is because of the increase in identity importance that one reaches this greater state of openness with close others. A crucial alternative explanation for the effect of participation on demarginalization, one in terms of some preexisting individual difference between posters and lurkers, is thereby ruled out. It is possible that people who are posters, compared with lurkers, are simply more willing to come out of the shadows, and so they would be more likely to come out to family and friends as well. Yet being a poster in and of itself did not have a separate, direct effect on self-acceptance and coming out to others, only an effect mediated by identity importance. Moreover, the items measuring self-acceptance and coming out were explicitly phrased in terms of being consequences of newsgroup membership, not of prior conditions on which posters and lurkers could have differed.

There was one direct effect of participation in the group, however, that was not mediated by identity importance. Posters, more than lurkers, had decreased feelings of social isolation. Thus, at least with these forms of marginalized identities, there are benefits of group involvement that accrue regardless of how important the identity becomes to oneself. As Schachter's (1959) affiliation research showed, just making contact with others reduces feelings of isolation—identification with the group is not needed. Why this would be more true of participants than of lurkers, who also can see in the newsgroup that they are not alone, might be because participation causes others (in the newsgroup) to notice one's manifestation of the new identity—a key factor in making it feel like a real part of the self (Gollwitzer, 1986).

Study 3: Demarginalization of Ideological Identities

According to etiquette books, sex and politics are at the top of the list of topics that one should avoid in polite conversation. Therefore, to replicate the results of Study 2 (which focused on marginalized sexual identities), in Study 3 we turned to newsgroups concerned with marginal, nonmainstream political and ideological beliefs. The proposed model of identity demarginalization was intended to apply to any concealable marginal aspect of identity, not only those related to sexual preference. Holding "subversive" political beliefs that are generally unpopular in one's society has long been a major secret source of identity for people across generations and political systems.

Method

The identical questionnaire used in Study 2 was again distributed to posters and lurkers, but in a different set of newsgroups and E-mail "listservs." (Listsers are a form of private newsgroup conducted via personal E-mail, such that only members can read and respond to messages.) In Study 3, we focused on newsgroups with an ideologically marginalized character. Among the newsgroups selected for study were those catering to a belief in governmental cover-ups, a belief in extraterrestrial visitors, and a belief in governmental cover-ups of extraterrestrial

visits. Also included were groups on the topics of White supremacy, citizen militias, and the cultural group skinheads. The specific newsgroups were *alt.conspiracy*, *alt.skinheads*, *alt.conspiracy.area51*, *alt.politics.nationalism.white*, *misc.activism.militia*, and the RISKERS listserv.⁶

The survey sample consisted of posters and lurkers. Over a 3-week period, questionnaires were E-mailed to all those who posted in the selected groups. As before, cross-posts and advertisements were excluded. Additionally, only those posters and lurkers who appeared to adhere to the stated ideology of the particular newsgroup were sampled. Questionnaires were sent to 170 posters in the six newsgroups. Finally, in order to reach lurkers, a copy of the questionnaire was posted in each of the newsgroups every 3 days during the period of study.

Results

Sample characteristics. Of the questionnaires sent to posters, there were 10 responses from *alt.conspiracy*, 7 from *alt.conspiracy.area51*, 9 from *misc.activism.militia*, 15 from *alt.politics.nationalism.white*, 9 from *alt.skinheads*, and 9 from the RISKERS listserv, for a total of 59 returned surveys (see next paragraph). A total of 18 lurkers responded to the posted survey, for a total sample size of 77. The sample was composed of 13 women and 64 men. The age of respondents ranged from 15 to 62, with the average age being 34 years (see Table 1). The overwhelming majority of respondents lived in the United States. Posters had generally been reading longer than lurkers ($M_s = 16.1$ vs. 9.4 months).

Feelings of marginalization. The mean rating of how embarrassed the respondent would be if others found out about his or her particular interest was 1.4 on the 3-point scale ($N = 52$), with a 95% confidence interval of 1.2 to 1.7. Thus, the respondents generally reported some, but lower, amounts of embarrassment concerning their newsgroup interest than had respondents in Study 2. However, the Study 3 respondents felt that society attaches considerable stigma to their ideological beliefs, with a mean of 5.0 on the 1–7 scale (95% confidence interval of 4.5 to 5.4). Once again, these results were the same for posters and lurkers (both $p_s > .24$).

Comparison of Study 2 and Study 3 samples. The overall response rate for posters was 35%, considerably lower than in Study 2. The lower response rate is worthy of comment as it points to one important difference between the newsgroups of Study 2 and Study 3. Following posted notification about the survey, several posters in the ideological newsgroups posted exhortations not to participate because they suspected we were agents of the FBI, CIA, or another government agency seeking information to use against the group.

Although this behavior was certainly consistent with the suspiciousness and skepticism members of these groups have for government, it made data collection more difficult. After influential members of the newsgroups submitted these posts, very few surveys were returned. In response, we wrote by E-mail to posters who had questioned our intent and posted messages in the various newsgroups to reassure potential respondents that we were not affiliated with any government agency. Only then did group members begin to complete and return the surveys.

The groups differed in other interesting ways, as shown in Table 1. Whereas most ideological group respondents were male,

the sexual group sample was more evenly balanced between the genders. Also, on average, the relevant newsgroup was more important to individuals with marginalized sexual identities than to those with marginalized ideological identities. Perhaps this is due to the extensive media coverage of militia groups and White supremacy groups in North America and Europe, making those with marginalized political identities more conspicuous in society and newsgroups less needed to provide the group identity (see Frable, 1993).

The other notable comparison is that the ideological groups were not reliably more estranged from society, as one might expect. However, this may be because the marginalized sexual and ideological groups are both fairly highly estranged; the means reflect that 70% of the time for ideological group members and 60% of the time for the sexual identity group members the response frequently was selected for questions dealing with how often the person feels cut off from family, friends, and country.

Creation of indexes. All indexes were computed in the same way as they were in Study 2 to provide an exact replication. Within the indexes, the component items intercorrelated at an acceptable level: average $r = .39$ among the four importance index items (coefficient $\alpha = .71$), average $r = .37$ for the three social isolation index items (coefficient $\alpha = .62$), and average $r = .29$ among the three estrangement index items (coefficient $\alpha = .57$). The right half of Table 2 reports the correlations between the four outcome variables, which again indicate that they represent separate aspects of experience. Using these indexes, we estimated a structural model identical to the one we estimated in Study 2.

Participation and identity importance. Despite the substantially different type of marginalized identity studied, the results replicated the major findings of Study 2 (see Figure 4). The critical paths for the hypothesized model of demarginalization were again strongly significant: Among the newsgroup members (posters and lurkers), those who actively participated in the electronic newsgroup came to consider the group identity more important than did those who did not actively participate. Compared with lurkers, the average poster considered the newsgroup more important to his or her life, was more affected by the other members' opinions of him or her, and spent more time per day in the newsgroup (see Table 3); multivariate $F(1, 180) = 10.19$, $p = .0017$. As in the research by Deaux (e.g., 1996), active involvement in a group resulted in a stronger bond forged between the group identity and the individual's sense of self.

As in Study 2, differences in the length of time a person has been involved with the newsgroup did not account for the observed effect of participation on identity importance. Overall, length of time reading the newsgroup did not correlate with the importance index, $r = .05$, $p > .25$. Neither did this relation hold for lurkers alone, ($r = .11$, $p > .25$) or for posters alone, ($r = -.07$, $p > .25$). However, as in Study 2, the number of months a person had been posting did predict identity importance, ($r = .22$, $p = .07$). The longer a person had been posting,

⁶ RISKERS is an acronym for Real Interest Secrets Kept Entire Reality Sovereign.

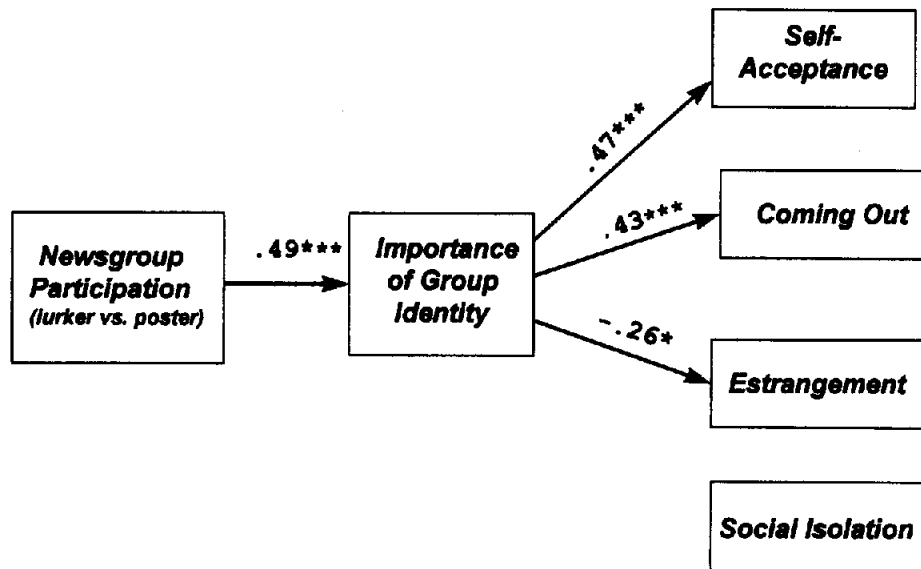


Figure 4. Demarginalization of ideological identities (Study 3): Structural equation model of the relations between group participation, importance of group identity, self-acceptance, disclosure of the identity to close others, social estrangement, and social isolation. Absolute values of all omitted paths < .15. * $p < .05$. *** $p < .01$.

the more important the group identity became to him or her. This result demonstrates the positive effect of active participation on the transformation of identity. Moreover, this result is inconsistent with an alternative interpretation of our findings in terms of preexisting differences between posters and lurkers.

The consequences of identity importance. As in Study 2, the four outcome variables—self-acceptance, coming out, estrangement, and social isolation—showed only low intercorrelations (see the right half of Table 2) and so constituted distinct potential consequences of newsgroup participation and identity importance. Figure 4 shows that identity importance was again strongly predictive of self-acceptance, of coming out to friends and family, and of feelings of estrangement, whereas the direct effects of participation were not reliable. Thus, the effect of group participation on self-acceptance of the marginalized identity was again mediated by the strength of the group identification.

In contrast to the results of Study 2, there was no direct effect of participation on social isolation nor one mediated by identity importance. We conjecture that the lack of effect of identity importance on social isolation in Study 3 is due to the fact that isolation from society (or at least the government) is the very theme of the set of ideological newsgroups we studied. Any increase in importance of these particular identities could therefore have increased feelings of social isolation as much as decreased them.

General Discussion

The results of the three studies paint a consistent picture of the effect of Internet newsgroups on the transformation of an individual's social identity. Study 1 showed that newsgroups

concerned with concealable marginalized identities were more important to the lives of their members, as indicated by the amount of active participation (average number of posts) by each member and by the impact that positive and negative feedback from other members had on each member's behavior. Studies 2 and 3 went further, examining the transformational ability of Internet group participation on these concealable marginalized identities. Consistent with the model of Deaux and her colleagues, group involvement (posting vs. lurking) led to increased importance of the group identity, which in turn increased self-acceptance of that identity.

It is hard to understate the power of the identity transformation effect obtained in Studies 2 and 3. As a direct result of Internet newsgroup membership and participation, over 37% of participants in Study 2 and 63% of those in Study 3 revealed to others what had been an embarrassing secret about themselves. This is particularly remarkable in the context of Study 2, because sexual preferences are often formed early in life. Given that the mean age in that sample was 37 years, involvement in those Internet newsgroups caused these people to reveal something to close family members and friends that many of them had kept hidden well into their adult lives.

Our interpretation of this phenomenon is in terms of identity demarginalization, a process by which participation in a group of similar others creates changes in one's identity—specifically, the acquisition of a positive group identity where there was formerly only isolation and feelings of being different. That our participants moved so dramatically to inform others in their life about this new identity is consistent with the premises of self-completion theory (Wicklund & Gollwitzer, 1982). According to that model, important identities need to be realized and ex-

pressed in daily life. The individual is motivated to have others notice this identity in order to make it a social reality (Brunstein & Gollwitzer, 1996; Gollwitzer, 1986). The participants in our studies were motivated to come back to real life with their Internet life to verify their identity and make it "real."

Our data thus support the more active theories of the self, in which the individual is motivated to construct and hold his or her identities, in contrast to more purely informational theories of the self. For those with marginalized identities, degree of participation in the newsgroup, through its effect on identity importance, reliably predicted which group members would disclose this formerly hidden aspect of self to important others in their lives.

The Reality of the Virtual

Whether virtual or electronic groups operate by the same principles as real-life or "face-to-face" groups has been a debating point for some years among researchers of computer-mediated communication (CMC), which concerns E-mail interactions (Kiesler, Siegel, & McGuire, 1984; Lea & Spears, 1995; Spears, Lea, & Lee, 1990; Walther, Anderson, & Park, 1994). Some authors, for example, have argued that the relative lack of social cues in E-mail interactions leads to a greater incidence of antisocial behaviors than would occur in face-to-face interactions, presumably because of deindividuation (Kiesler et al., 1984). However, others have found that despite (or perhaps even because of) the greater anonymity of CMC, group members form and adhere to norms just as they do in face-to-face groups (Spears et al., 1990).

Our findings are consistent with the position that the principles that apply to face-to-face group processes also apply to electronic modes of group participation. Just as with nonelectronic group identities (e.g., Deaux, 1996), virtual groups are important to the daily lives of their members, and virtual group identities become an important part of the self. As with real-life groups, the positive versus negative feedback of group members shapes one's subsequent behavior to the extent that belonging to that group matters to the individual (Study 1). In addition, just as individuals with conspicuous marginalized identities feel less different and more self-accepting than do those with concealable marginalized identities because of the visible presence of similar others in the environment (Frable, 1993), the existence of marginalized-content newsgroups increases self-acceptance by making visible what was previously hidden (Studies 2 and 3).

Not only do virtual groups operate the same way real-life groups do, but as our findings also show, what happens in one group or sphere affects behavior in the other. In their spontaneous comments, many respondents in Studies 2 and 3 mentioned that it was the lack of an equivalent group to belong to in real life that caused them to seek out their newsgroup and to identify strongly with it. Similarly, the changes in identity caused by virtual group membership (and especially participation) had ramifications for the individual's real-life relationships, making him or her more likely to share this previously hidden identity. This bidirectional flow of influence between the two spheres belies the claim by many (e.g., Beninger, 1987; Stoll, 1995) that

the Internet can give only the illusion of community—that social activity via the computer serves only to increase isolation and to cause the deterioration of the individual's real-life relationships.

While our findings make the case for the reality of the virtual, it must nonetheless be acknowledged that there are key differences between virtual and real-life group processes. Kiesler et al. (1984) were among the first to note the deindividuating effects of the relative anonymity of E-mail communication. Just as delivering bad or unwelcome news is easier to do by telephone or letter than in person, it is easier to disagree or to make negative or aggressive comments over E-mail than face-to-face (see also Diener, 1980). However, the greater anonymity of Internet group participation can also have benefits. As Turkle (1995) compellingly argued, it also allows for the exploration of identity aspects that were previously closed to the individual, which can lead to a more multifaceted and richer self-concept. As explained in her analysis, the Internet allows individuals—removed from the public consequences of their statements, opinions, and behavior—to try out different personae and to experience how others react to such personae in real life (e.g., "gender-bending," in which individuals portray themselves as members of the opposite sex). In our studies, individuals used the shelter of anonymity to express those important aspects of themselves that might well be sanctioned if expressed for attribution—that is, publicly and nonanonymously (see, e.g., Kelly & McKillop, 1996).

The Benefits of Participation

Through participation in an Internet group that shares a marginalized aspect of one's identity, that part of the self is transformed, becoming more acceptable. As participants in the marginalized newsgroup find the newsgroup to be increasingly more important to their identity, they begin to feel that this aspect of themselves is more socially acceptable than they had thought. This reduces the inner conflict between the marginalized self aspect and cultural standards and allows the individual to be more open about that aspect with important others, such as family and friends.

In her revision of psychoanalytic theory, Horney (1946) argued that just such conflicts between the self and public standards were the major cause of neurosis, anxiety, and unhappiness. Years later, E. E. Jones et al. (1984, p. 135) noted similarly that possession of a stigmatized identity made the individual less able to cope with the stresses of daily life because self-esteem was reduced. Pennebaker (1989) also argued for a negative effect of identity concealment on coping, but for different reasons: Not only does the act of concealment require continuous effort, thus becoming a long-term stressor, but concealment also prevents the individual from bringing the aspect into the open, where it can be dealt with.

From these theoretical statements, one would expect that over time, concealing an important aspect of the self from others would have negative health consequences. Pennebaker (1989, 1990) found that bringing concealed identities into the open, even anonymously (as in his experimental situation), significantly reduced reported health symptoms in a long-term follow-up. Also, a study by Larson and Chastain (1990) showed that

individuals who scored the highest on a personality scale measuring tendencies of self-concealment also reported a greater number of bodily symptoms (e.g., headaches, colds), were more anxious, and were more likely to be depressed than those scoring low on the scale.

Self-disclosure can also provide social validation of one's beliefs and feelings, at least among similar others, as in the Internet groups we studied (Archer, 1987). It can also bring feelings of acceptance from those confided in, information useful in dealing with problems associated with the identity, and motivational support in the form of encouragement (Derlega et al., 1993, p. 101). On Internet newsgroups, only posters would be expected to share in these benefits, as lurkers do not engage in any such self-disclosure, underscoring again the benefits of group participation.

This is not to say that revealing secrets about oneself always leads to positive outcomes and is without risks. Often the person confided to reacts badly at learning this new information, and the relationship is changed or even ended (Kelly & McKillop, 1996). Rejection by others following disclosure can lead to increased feelings of isolation and lowered self-worth. Recognition of this possible outcome is clearly why our participants in Studies 2 and 3 kept their marginalized identities to themselves for so long. The potential negative reactions of others must be weighed against the positive gains from self-disclosure in any decision to come out (see Pennebaker, 1990, chap. 8).

Is the Virtual Entirely Virtuous?

In the *Time* magazine article (Handy, 1997) in which Ellen DeGeneres came out as a lesbian and announced that her popular television character would follow suit, the television evangelist Jerry Falwell denounced both actions. That same month, the Oklahoma City bombing trial of an avowed citizen's militia member began, and 38 cult members committed suicide on the basis of their beliefs about the existence of extraterrestrials. The newsgroups we studied included those related to the marginalized sexual identities, beliefs in the existence of extraterrestrials, and antigovernment activism prominent in all of these well-publicized events. Is the demonstrated effect of such newsgroups to increase an individual's acceptance of these nonmainstream identities, to provide social support and validation of such beliefs, and to encourage real-life behavior consistent with these identities an unequivocally good thing?

The answer, of course, depends on one's valuation of the marginalized identity in question. Almost by definition, mainstream society will not value marginalized identities and will place a negative value on any mechanism that encourages their open expression. At the same time, our findings show that individuals with these identities place a high value on their relevant newsgroups and reap personal benefits of self-esteem and self-acceptance.

Thus, whatever position one takes regarding the values of the various marginalized identities, the psychological effects of virtual group participation for the individual are nonetheless real. In all likelihood they will be an increasingly common feature of life in the age of the Internet.

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