

Sex Differences in Influenceability

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This article examines the hypothesis that women are more influenceable than men in a variety of situations. On the basis of a literature review focusing primarily on persuasion and conformity research, the hypothesis is rejected. For persuasion research and for conformity studies not involving group pressure, there is scant empirical support for a sex difference, and for group pressure conformity research, there is support among a substantial minority of studies. Also explored in this article is the possibility that various sex differences in social influence studies are a product of contextual features of experimental settings. The importance of the cultural context in which research is conducted is suggested by the fact that findings reporting greater influenceability among females were more prevalent in studies published prior to 1970 than in those published in the 1970s. In addition, the importance of the content area of the influence attempt is well established. Finally, sex differences in various psychological processes that may mediate persuasion and conformity are evaluated as possible explanations for those influenceability sex differences that appear to be genuine. The explanation that there is a propensity to yield inherent in the female sex role appears to account for some aspects of influenceability findings, but a second explanation, a tendency for women more than men to be oriented to interpersonal goals in group settings, is also plausible.

Social psychology textbooks that discuss sex differences in influenceability typically express the view that women are more easily influenced than men (Aronson, 1972; Baker, 1975; Baron, Byrne, & Griffitt, 1974; Bird, 1940; Freedman, Carlsmith, & Sears, 1970; E. P. Hollander, 1967; Krech, Crutchfield, & Ballachey, 1962; Middlebrook, 1974; Secord & Backman, 1964; Worchel & Cooper, 1976). Representative statements can be drawn from

the text by Freedman, Carlsmith, and Sears (1970). With regard to persuasion, they noted, "There is a considerable amount of evidence that women are generally more persuasible than men" (p. 332), and with regard to conformity, they asserted, "The most consistent and strongest factor that differentiates people in the amount they conform is their sex. Women conform more than men. . . . This difference between men and women has been found in virtually every study in which both sexes participated" (p. 239).

These views are by no means confined to the general social psychology texts. Textbooks in the field of attitude change also suggest that females are persuasible (e.g., Cohen, 1964; Rosnow & Robinson, 1967). McGuire's widely cited survey of theory and research on attitudes in the *Handbook of Social Psychology* (1969) was unequivocal in generalizing the state of research on sex differences in influenceability:

There seems to be a clear main-order effect of sex on influenceability such that females are more

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susceptible than males. Examples can be found over the whole range of social-influence situations, including suggestibility, conformity, and persuasibility. (p. 251)

In addition, surveys of conformity research (e.g., Allen, 1965; Bass, 1961; Nord, 1969) feature a similar conclusion. Nord made the common assertion that "it has also been well established, at least in our culture, that females supply greater amounts of conformity under almost all conditions than males" (p. 198).¹

In general, then, writers who summarize the social influence literature agree on this sex difference. They typically characterize it in terms such as "large, strong, clear," and "well established" and claim that it is both "general" and "consistent." Further, they appear to have settled on an explanation of the presumed difference. The sex difference, it is commonly reasoned, follows from *sex roles*—normative pressures characterizing our culture and prescribing that females shall yield to social influence and that males shall remain relatively independent. This explanation is often summarized as the "submissiveness of the female role." These role differences are said to be learned as a product of socialization pressures that apply differentially to boys and girls. Middlebrook's (1974) text provided a succinct statement of this reasoning: "The feminine role in our society has traditionally emphasized passivity and yielding so that when little girls are socialized into their roles, they may be trained to yield" (p. 190). In a similar vein, Worchel and Cooper (1976) wrote, "The difference in conformity rates is consistent and may be due to the socialization processes that teach men to be 'independent thinkers' and to 'stand on their own two feet,' while these values are seldom seriously suggested as suitable for women" (p. 335).

Despite wide agreement regarding the difference and its origin in sex roles, the evidence that writers of texts and review chapters provide to support these conclusions is in all cases exceedingly limited. To demonstrate the sex difference, a small number of studies have provided popular citations. For persuasibility, a study by Janis and Field (1959) is usually cited. For conformity, cita-

tions are less concentrated on a single study, but Crutchfield (1955) is popular, as is the work of Tuddenham (e.g., 1958). Regarding sex roles as the causal antecedent of the presumed sex difference, no references to empirical research are given—it seems that the point is regarded as self-evident. In view of this failure by writers to recognize in a systematic and representative fashion the extensive and readily available body of empirical findings, a fresh start would seem to be in order. This article begins by reviewing the empirical literature on sex differences in social influence studies in order to evaluate the accuracy of existing summaries of this literature and then proceeds to examine possible causes of any sex differences that are substantiated on the basis of this review.

Review of Studies Examining Sex Differences in Influenceability

In view of the strong claims that have been made for a sex difference in influenceability, a literature survey employing a statistical significance criterion provides a useful beginning for an examination of the literature. Nevertheless, tallying numbers of published studies reporting statistically significant sex differences is admittedly a fallible approach to determining whether a difference should be regarded as genuine. Even reanalyzing past studies in terms of more sophisticated statistical criteria, as recommended by some researchers (e.g., Tresemer, 1975a, 1975b), would leave untouched a variety of problems preventing clear interpretations of such tallies. As Block (1976) has emphasized, studies examining sex differences have varied widely in sensitivity of research designs, quality of sampling procedures, and reliability and validity of measuring instruments. Further, a substantial proportion of otherwise relevant studies employed subjects of one sex only, or employed both sexes but failed to report whether sex differences occurred (cf. Carlson & Carlson, 1960; Holmes & Jorgensen, 1971;

¹ Textbooks in the field of communication (e.g., Cronkhite, 1969; Wenburg & Wilmot, 1973) often include similar claims.

Table 1
The Effect of Subject Sex on Persuasion

Study	Results		
	Females more persuasive	No significant difference	Males more persuasive
Biondo & MacDonald (1971)		X	
Burgoon, Jones, & Stewart (1975)	X		
Cantor, Alfonso, & Zillmann (1976)		X	
Cathcart (1955)		X	
Chaiken & Eagly (1976)		X	
Chaiken, Fee, Keenan, & Johnson (Note 1)	X		
Chaiken, Sejwacz, Eagly, Gregory, & Christensen (in press, Studies 1 & 2)		X	
Chu (1966) ^a		X	
Cook, Bean, Calder, Frey, Krovetz, & Reisman (1970, Studies 1 & 2)		X	
Dean (1974, Studies 1 & 2)		X	
Dean, Austin, & Watts (1971)		X	
Dillehay & Jernigan (1970)		X	
Eagly (1974, Studies 1, 2, & 3)		X	
Eagly & Acksen (1971)		X	
Eagly & Chaiken (1975)		X	
Eagly & Telaak (1972)		X	
Eagly & Warren (1976)		X	
Eagly & Whitehead (1972)		X	
Eagly, Wood, & Chaiken (in press)		X	
Feldman (1974) ^b			X
Forer (1949)		X	
Furbay (1965)	X		
Goldstein (1959)		X	
Gray & Ashmore (1975)		X	
Haiman (1949) ^c		X	
Halperin, Snyder, Shenkel, & Houston (1976)		X	
Hjelle & Clouser (1970)		X	
Insko, Arkoff, & Insko (1965)		X	
Janis & Field (1959)	X		
H. Leventhal, Jones, & Trembly (1966) ^d	X		
Marquis (1973)		X	
Middleton (1960)		X	
Morelock (in press)		X	
Nisbett & Gordon (1967)		X	
Osterhouse & Brock (1970, Studies 1 & 2)		X	
Paulson (1954)	X		
Rosenberg (1962) ^e		X	
Rule & Rehill (1970)		X	
Scheidel (1963)	X		
C. W. Sherif, Kelly, Rodgers, Sarup, & Tittler (1973)		X	
Sikkink (1956)		X	
Silverman (1968)		X	
Silverman, Ford, & Morganti (1966, Studies 1 & 3)		X	
Silverman, Ford, & Morganti (1966, Study 2)	X		
Silverman, Shulman, & Wiesensthal (1970)		X	
Singh (1970) ^f	X		
Sloan, Love, & Ostrom (1974)		X	
Snyder (1974, Studies 1 & 2)		X	
Spiegel & Greenwald (1970)		X	
Whittaker (1965a)	X		
Whittaker & Meade (1967b) ^g		X	

Table 1 (continued)

Study	Results		
	Females more persuasive	No significant difference	Males more persuasive
E. E. Willis (1940)		X	
Worchel & Brehm (1970)		X	
Zillmann & Cantor (1974)		X	

^a Taiwanese subjects.

^b Kenyan subjects.

^c No difference by the usual criterion of mean opinion change, but a significantly greater proportion of females than males changed their opinions about the message.

^d Females were more persuasive on a verbal but not a behavioral measure.

^e Israeli subjects; there was some evidence of a sex difference (females more persuasive) among most culturally traditional subjects.

^f Indian subjects.

^g American, Chinese (Hong Kong), Rhodesian, Lebanese, Peruvian, and Brazilian subjects; there was a significant sex difference (females more persuasive) only in subjects from Hong Kong.

Schwabacher, 1972). Yet some ordinarily severe biases may be less problematic in relationship to sex differences than they are for most other research problems. For example, journals may generally be biased toward publication of studies with significant findings (cf. Greenwald, 1975), and studies reporting findings that confirm hypotheses supported by earlier research may be accepted for publication more readily than studies reporting reversals of earlier findings. These biases should be alleviated because sex difference findings, especially in the social influence literature, were until recently usually peripheral to researchers' major hypotheses and were reported only as secondary findings. Acceptability of studies for publication was primarily a function of their major findings.

With social influence studies scattered over journals of several disciplines, a complete survey would be very difficult to conduct. To limit the domain somewhat, this review gives detailed coverage to two classic types of social influence research—persuasion and conformity, the two areas on which the claim of female influenceability is generally based. Less complete attention is given to forms of influence that are more peripheral to theory and research in the area (e.g., suggestibility, volunteering) or that have not yielded many studies reporting a test of sex differences (e.g., role playing and counterattitudinal advocacy). Prior surveys by Maccoby (1966)

and Maccoby and Jacklin (1974) proved helpful though limited in time span and journal coverage. All social psychological journals were then surveyed, and all relevant citations encountered in textbooks and journal articles were located. Since the survey was extensive both in time span and journal coverage, it should include a high proportion of published persuasion and conformity studies that appeared in psychological journals and reported the outcome of a test for sex differences. To enhance chances of obtaining significant sex differences, only studies using subjects predominantly of high school age or older were included, and these studies were classified according to whether a main effect sex difference was reported as significant at the .05 level or less. Sample sizes were typically modest, with the majority ranging from about 40 to 250. Subjects were generally American or Canadian high school or college students, and any unusual features of subject populations are noted.

Persuasion Research

In persuasion situations, an influencing agent gives his or her position on an issue and presents arguments supporting the position. Subjects' subsequent agreement with the position is assessed to provide a measure of how much they are influenced. Persuasion studies have generally not reported a test of sex

Table 2

The Effect of Subject Sex on Conformity: Group Pressure Studies

Study	Results		
	Females more conforming	No significant difference	Males more conforming
Allen & Levine (1969)		X	
Beloff (1958)		X	
Bem (1975)		X	
Breger & Ruiz (1966)		X	
Buby & Penner (1974)		X	
Chandra (1973) ^a	X		
Coleman, Blake, & Mouton (1958)		X	
Costanzo & Shaw (1966)		X	
Crano (1970)		X	
Crutchfield (1955, Study 1)	X		
Crutchfield (1955, Study 2) ^b			X
Delin & Poo-Kong (1974) ^c		X	
DiVesta & Cox (1960, Studies 1 & 2)	X		
Endler (1965)		X	
Endler (1966)	X		
Endler, Coward, & Wiesenenthal (1975)		X	
Endler & Hoy (1967)		X	
Endler, Wiesenenthal, Coward, Edwards, & Geller (1975)	X		
Endler, Wiesenenthal, & Geller (1972)	X		
Ex (1960)		X	
Frager (1970) ^d		X	
Geller, Endler, & Wiesenenthal (1973)	X		
Gerard, Wilhelmy, & Conolley (1968)	X		
Glinski, Glinski, & Slatin (1970)		X	
E. P. Hollander, Julian, & Haaland (1965)	X		
Johnson & MacDonnell (1974)		X	
Jovick (1972)		X	
Julian, Regula, & Hollander (1968)	X		
Julian, Ryckman, & Hollander (1969)	X		
Kanareff & Lanzetta (1960b)		X	
Kanareff & Lanzetta (1961)			X
Klein (1972) ^e		X	
Landsbaum & Willis (1971)		X	
Larsen (1974)	X		
McDavid & Sistrunk (1964)		X	
Meyers & Arenson (1968)		X	
Nahemow & Bennett (1967) ^f		X	
Nakamura (1958)	X		
Phelps & Meyer (1966)		X	
Reitan & Shaw (1964)	X		
Ross, Bierbrauer, & Hoffman (1976)		X	
Rotter (1967)	X		
Sistrunk, Clement, & Ulman (1972)		X	
Sistrunk & McDavid (1965)		X	
Smith (1970)		X	
Steiner & Rogers (1963)		X	
Stone (1973)		X	
Stricker, Messick, & Jackson (1970)		X	
Timaeus (1968) ^g		X	
Tuddenham (1958, Study 1)	X		
Tuddenham (1958, Study 2)		X	
Tuddenham (1961a)	X		
Tuddenham, MacBride, & Zahn (1958)	X		

Table 2 (continued)

Study	Results		
	Females more conforming	No significant difference	Males more conforming
Vaughan & Taylor (1966) ^a	X		
Vidulich & Bayley (1966)		X	
Vidulich & Stabene (1965)		X	
Whittaker (1965b)	X		
Wiesenthal, Endler, Coward, & Edwards (1976)		X	
Wiesenthal, Endler, & Geller (1973)		X	
R. H. Willis & Willis (1970)		X	

Note. Conformity measures not assessing responses to specific influence inductions are omitted (e.g., Beloff's, 1958, "conventionality" measure, and Nahemow & Bennett's, 1967, index of compliance with existing norms).

^a Fijian subjects.

^b Middle-aged subjects.

^c Australian subjects.

^d Japanese subjects.

^e One half of subjects were geriatric.

^f Geriatric subjects.

^g German subjects.

^h New Zealander subjects.

differences, but Table 1 lists those studies located that did provide this information. The most common finding by far is no sex difference. Of the 62 studies listed in Table 1, 51 (82%) reported no difference, only 10 (16%) yielded the significant female persuasibility finding so often reported in summaries of the literature, and 1 (2%) yielded significantly greater persuasibility among males. In addition to studies listed in Table 1, three early articles sometimes cited as establishing the greater persuasibility of women (Bateman & Remmers, 1941; Knower, 1935, 1936) reported such a difference for at least some experimental conditions but did not indicate statistical significance.

Among the 10 studies in Table 1 reporting women to be more persuasive than men, the role of the Janis and Field (1959) experimental paradigm deserves comment, since it accounts for three of these studies. Janis and Field presented pro and con written communications on five topics and found females more persuasive than males—a finding replicated both in the Whittaker (1965a) study and in one of Silverman, Ford, and Morganti's (1966) two replications. Yet no difference was reported for the other Silverman et al. (1966) replication or for Chu's

(1966) replication with Taiwanese subjects. Whittaker and Meade's (1967b) replication in the United States, Hong Kong, Rhodesia, Lebanon, Peru, and Brazil found a significant sex difference (females more persuasive) only in Hong Kong. More recently, C. W. Sherif, Kelly, Rodgers, Sarup, and Tittler's (1973) partial replication, which used two topics from the Janis and Field study and two new topics, did not obtain an overall sex difference.

Finally, a word of caution is in order concerning the Feldman (1974) finding, which provides the lone report of males more persuasive than females. Not only is the cultural context of this study unusual (Gusii high school students in Kenya) but also its male and female subjects were for the most part from different, predominantly single-sex schools.

Conformity Research

In conformity studies, participants are informed that the source holds a particular belief or attitude, but arguments are not provided to support this position. The source's position generally differs from that of the participant, whose agreement with the source

is then assessed. The majority of conformity studies involve small-group or dyadic interaction. Such experiments, categorized in this article as *group pressure* conformity studies, generally have two characteristics: (a) Other members of the group serve as the influence source, and (b) subjects believe that their responses are under the surveillance of other group members. Well-known examples of such group experiments are M. Sherif's (1935, 1936) autokinetic effect experiment involving group members' judgments of the apparent movement of a point of light and Asch's (1956) experiment in which confederates gave false judgments of the length of lines. Other group conformity studies have simulated small-group interaction by ostensibly reporting members' responses to each other via a panel display (Crutchfield, 1955), or else tape-recorded voices have been used to simulate other members' responses, leading subjects to believe that the other members could hear their answers (Blake & Brehm, 1954). In contrast with these group pressure studies, other conformity situations (e.g., King, 1959) have presented discrepant opinions to subjects by attributing them to persons or groups of persons who are not present. Usually an opinion questionnaire is utilized, with subjects giving their own opinions directly after reading opinions attributed to other persons. In a few conformity experiments (e.g., Wyer, 1966, 1967), subjects have exchanged their views in a real or simulated group, but their responses were not under the surveillance of other group members. These studies are classified as not involving group pressure because one of the critical conditions of group pressure studies—surveillance by the influencing agent—is absent.

Table 2 lists group pressure conformity studies reporting a test of sex differences.² Of these 61 studies, 38 (62%) reported no difference, 21 (34%) found females to be significantly more conforming, and 2 (3%) found males significantly more conforming. Table 3 presents conformity studies not involving group pressure. Of these 22 studies, 19 (86%) reported no difference, 2 (9%) reported significantly greater conformity

among females, and 1 (5%) reported significantly greater conformity among males.

It is worth noting that M. Sherif's (1935, 1936) research was conducted with male subjects only. Further, despite frequent citations of Asch's (1956) work in support of the presumed conforming tendency of females (e.g., by Krech et al., 1962), he reported data only for males, and whatever sex differences occurred in those of his studies that tested both sexes have so far not been reported (Asch, Note 3).³ Two other studies sometimes cited as establishing a female conformity tendency (Tuddenham, 1961b; Walker & Heyns, 1962) lacked reports of significance. Finally, five additional studies not given in Table 2 or 3 reported females to be significantly more conforming in one or more experimental conditions, but no overall test of the sex differences was reported. Four of these studies employed actual or simulated groups (Allen & Crutchfield, 1963; Crowne & Liverant, 1963; Kanareff & Lanzetta, 1960a; MacBride & Tuddenham, 1965), and one did not (Sistrunk, 1971). Although it is difficult to classify these studies, were a decision made to add them to the "Females more conforming" column of Table 2 or 3, the percentage of studies reporting greater conformity among females would be elevated from 34% to 38% for Table 2 and from 9% to 13% for Table 3.

One of the two reports of significantly greater male conformity in a group pressure situation (Crutchfield, 1955, Study 2) compared middle-aged men and women. To explain the unexpected direction of the difference, Crutchfield suggested that the men were less selected than the women in terms of intelligence and professional success, but he

² On the whole, sex differences are similar for real and simulated groups. Further, Olmstead and Blake (1955), comparing actual groups and groups simulated via tape-recorded voices, reported no differences in conformity behavior.

³ Among relatively exact replications of the Asch study, three reported no sex differences (Frager, 1970; Johnson & MacDonnell, 1974; Timaeus, 1968), two reported females more conforming (Chandra, 1973; Larsen, 1974), and one did not report whether the main effect sex difference was significant (Crowne & Liverant, 1963).

Table 3

The Effect of Subject Sex on Conformity: Studies Not Involving Surveillance by the Influencing Agent

Study	Results		
	Females more conforming	No significant difference	Males more conforming
Adair (1972)		X	
Eagly (1969)		X	
Feldman-Summers, Montano, Kasprzyk, & Wagner (Note 2, Studies 1 & 2)		X	
Goldberg (1974)		X	
Goldberg (1975)		X	
King (1959)	X		
Madden (1960)		X	
Patel & Gordon (1960)	X		
Sampson & Hancock (1967)			X
Sistrunk (1969)		X	
Sistrunk (1972)		X	
Sistrunk (1973)		X	
Sistrunk & Clement (1970) ^a		X	
Sistrunk, Clement, & Guenther (1971) ^a		X	
Sistrunk & McDavid (1971, Studies 1, 2, 3, & 4)		X	
Wiener (1959)		X	
Wyer (1966)		X	
Wyer (1967)		X	

^a Brazilian and American subjects.

presented no data to substantiate this conclusion. Kanareff and Lanzetta (1961) were puzzled concerning the unexpected tendency for males to be more conforming and suggested that the effects of the sex variable may be contingent on a variety of features of the experimental context. The remaining report of greater conformity among males is Sampson and Hancock's (1967) study (see Table 3), in which subjects were exposed to fictitious group norms. An unusual feature of this study was the stress the instructions placed on doing well on the task. The greater male conformity, primarily attributable to the first-born males, was explained by the authors in terms of this feature of the experiment, but in view of other research (e.g., Wyer, 1967), the explanation appears doubtful.

In summary, the modal finding in the conformity literature is no difference between the sexes. Yet in group pressure settings, a substantial minority of studies has reported differences in the female direction.

Other Social Influence Paradigms

A considerable amount of information is available concerning the behavior of women and men in *suggestibility* situations, in which the induction of influence takes the form of a very simple demand, generally given repeatedly by an experimenter, who is often presented as a "hypnotist." Authors of earlier surveys of this literature (e.g., Brown, 1916; Coffin, 1941; Hull, 1933; Weitzenhoffer, 1953) contended that there was a slight, often nonsignificant, but nevertheless consistent tendency for females to be more suggestible than males. Yet most later investigations have obtained little support for a sex difference. For example, Hilgard (1965) reported that with the exception of one early study in which females proved more suggestible than males (Hilgard, Weitzenhoffer, & Gough, 1958), no significant sex differences occurred in the extensive series of investigations of hypnotic phenomena conducted in his laboratory. Similarly, Barber and Calverley (1963) reported no sex difference in a study

assessing 724 subjects on the Barber Suggestibility Scale, which measures influenceability in response to a number of hypnotic-like inductions such as arm lowering and levitation. However, on the basis of a series of suggestibility studies conducted in Sweden, Stukát (1958) reported females to be very slightly more suggestible in response to most inductions. When statistical significance was considered for Stukát's 29 comparisons of males and females, in 24 (83%) there was no significant difference, in 4 (14%) females were more suggestible, and in 1 (3%) males were more suggestible.

Another social influence paradigm is the *obedience* experiment devised by Milgram (1963). In this situation an experimenter orders a subject to deliver electric shock to another subject. Milgram (1974) reported women's level of obedience "about identical" to that of men, but Kilham and Mann (1974), employing Australian university students as subjects, reported females significantly less obedient than males. Using a puppy rather than a human as the shock victim, Sheridan and King (1972) found women more obedient than men.

In *role-playing* and *counterattitudinal advocacy* situations, participants deliver a persuasive message to themselves by playing a role or taking a particular position on an issue. Such a situation is generally devised so that the role or position is discrepant from participants' prior views, and their change toward the views they have been induced to take is assessed. Unfortunately, sex differences have rarely been examined in studies of this type, but most reports that were located showed no difference (Gray & Ashmore, 1975; Greenbaum, 1966; Laird & Berglas, 1975; Linder, Cooper, & Jones, 1967; Riess & Schlenker, 1977; Stanley & Klausmeier, 1957; Zanna, Higgins, & Taves, 1976; Zimbardo, 1965). However, Kelman, Baron, Sheposh, and Lubalin (Note 4) reported a role-playing study in which males showed more attitude change than females, particularly in a value-dilemma situation, in which subjects defended an organization that had values that were discrepant from their own but were endorsed by a reference group.

Numerous other experimental paradigms

could be viewed as sites for the induction of influence. For example, Rosenthal (1966) reported females more susceptible than males to the *experimenter expectancy effect*, by which experimenters' expectancies about how data will turn out bias subjects to respond in the expected direction. Yet very few of the studies on which Rosenthal based this generalization reported significant main effects of subject sex, and the generalization appears doubtful. More adequately supported is Rosenthal and Rosnow's (1975) claim that females are more likely than males to comply with requests to *volunteer to be a subject* in psychological experiments. Rosenthal and Rosnow's thorough literature review yielded a median volunteering rate of 60% for women and 45% for men, but the rates were 53% and 67%, respectively, for studies involving stress.

In group studies assessing the *impact of group discussion* on members' attitudes and beliefs, investigations have yielded no sex differences (Burt, 1920; Carment, 1968; Fauquier & Vinacke, 1964; Steinbacher & Gilroy, 1976). Earlier studies lacking adequate statistical treatment of the data have claimed both greater impact of discussion on males (Kirkpatrick, 1936) and on females (Jenness, 1932).

Social learning and *conditioning* studies, many of which could be interpreted in terms of social influence, also seem to offer little clear-cut evidence for a sex difference. For example, in attitudinal verbal reinforcement studies, in which the induction of influence takes the form of verbal responses (e.g., "Good") to subjects' opinions, tests for sex differences have usually found no difference (e.g., Insko, 1965; Insko & Butzine, 1967; Insko & Cialdini, 1969). Also, Maccoby and Jacklin's (1974) review suggested that the great majority of studies of both spontaneous imitation and observational learning find no sex differences, and among studies that do report differences, males are as likely as females to show more learning.

Discussion

This review suggests that for persuasion research and conformity research not involv-

ing group pressure, the proportions of studies in which females were more influenced than males are very small. In fact, subtracting the percentage of studies reporting significant differences in the male direction from the percentage reporting significant differences in the female direction yields a net difference in the female direction of only 14% for persuasion and 4% for non-group-conformity studies. Further, the research areas of suggestibility, volunteering to be a subject, and social learning suggest a sex difference only for volunteering, and the volunteering findings proved to be specific to the content area of the experiments for which subjects volunteered. Other social influence paradigms yielded too few reports to produce any but the most uncertain conclusions, but there is no suggestion of strong or consistent sex differences in these areas.

In contrast with these largely negative findings, there is fairly strong evidence for a sex difference among conformity studies involving group pressure. In group pressure settings the net difference obtained by subtracting the percentage of studies reporting significant differences in the male direction from the percentage reporting significant differences in the female direction climbs to 31%. More important than an absolute percentage is the fact that the percentage of studies demonstrating female influenceability is significantly larger for group pressure conformity studies (34% in Table 2) than for persuasion studies and conformity studies not involving groups (14% in Tables 1 and 3 combined), $\chi^2(1) = 7.05, p < .01$.⁴

To help interpret these tallies of persuasion and conformity studies, it is helpful to know that Maccoby and Jacklin (1974) regarded those sex differences as "well established" for which the net percentage of studies yielding significant sex differences in a particular direction ranged from 19% to 50% (cf. Block, 1976).⁵ Even by this quite lenient standard, support for an influenceability sex difference is inadequate except for group pressure conformity studies. However, before evaluating any more completely the very slight balance favoring female influenceability in Tables 1 and 3 and the stronger tendency in Table 2, the types of experimental situations typically

employed in this research must be taken into account.

Relevant Contextual Features of Social Influence Experiments

In designing an experiment, an investigator makes many decisions concerning experimental materials, and these materials establish a social context in terms of which influence is attempted. Key decisions concern the *content* of the influence induction and its *source*. If design decisions typically favor types of materials that induce greater influenceability in one sex or the other, a sex difference not inherent in the general nature of social influence behavior may follow. The causative agent would be the particular levels chosen for content and source variables and other contextual features of the experiment. In addition, more general features of the social context, including relevant aspects of role systems and of the network of cultural meanings governing behavior in the experimental situation, are generally not under the researcher's control but may affect the outcomes of experiments.

Historical Period

The historical period during which research was conducted is a major determinant of the likelihood of obtaining findings demonstrating that women are more influenceable than men. Thus, a pronounced difference in the distribution of findings is revealed by comparing studies published before 1970 with those published in the 1970s. Among the persuasion experiments listed in Table 1, 7

⁴ All percentages were calculated using statistical significance at the .05 level as the sole criterion of classification. An effort to take trends into account for the large number of studies with nonsignificant effects proved unsuccessful because relatively few reports (e.g., less than one third of the no-difference studies listed in Table 1) provided main effect means or sufficient information so that the direction of a nonsignificant sex difference could be inferred.

⁵ The net percentage score was not Maccoby and Jacklin's (1974) only guide for judging the validity of assumed sex differences, and they did not regard the evidence in some research areas with scores in this range as sufficient to support the claim for a sex difference (cf. Block, 1976).

(32%) of the 22 studies published before 1970 yielded greater influenceability among females, but only 3 (8%) of the 40 studies published in the 1970s yielded this finding. The comparable figures for the group pressure conformity studies given in Table 2 are 16 (43%) of 37 for the pre-1970 period, contrasted with 5 (21%) of 24 for the 1970s. For the conformity studies not involving surveillance given in Table 3, the figures are 2 (22%) of 9 for the pre-1970 period, compared with 0 (0%) of 13 for the 1970s. Although the difference between the two time periods is significant only for Table 1, the time trend is in the same direction and of approximately the same magnitude in all three tables, and the overall figures based on combining the three tables are 25 (37%) of 68 studies yielding greater influenceability among females for the pre-1970 period, and 8 (10%) of 77 studies for the 1970s. Based on the combined tables, the effect of historical period is highly significant, $\chi^2 (1) = 12.83, p < .001$.

The significant effect of time period on the distribution of studies provides striking evidence for Gergen's (1973) "social psychology as history" hypothesis: The social psychological impact of biological sex is apparently contingent on a particular cultural context. Although greater influenceability among females still appears in very recent research, especially in group pressure conformity studies, the likelihood of obtaining this finding has lessened substantially. In fact, the plausibility of the claim of a sex difference in influenceability is quite different for the pre-1970 period, compared with the 1970s. The net percentage of studies yielding the female influenceability finding (i.e., subtracting the percentage of studies yielding male influenceability) is sufficient, by the standards used by Maccoby and Jacklin (1974), to consider the sex difference well established in the pre-1970 period for both persuasion (32% for Table 1) and group pressure conformity (38% for Table 2), although not for other types of conformity situations (11% for Table 3).

Content of the Influence Induction

When individuals accept influence from other persons or groups as part of an *informational influence process* (e.g., Deutsch & Gerard, 1955), they do so because they view them as sources of valid information. Such an approach suggests that the content area in terms of which change is induced affects the success of the effort. In particular, it has been repeatedly demonstrated that individuals are more readily influenced to the extent that they lack information about a topic or regard it as trivial and unimportant. Thus, individuals are more easily persuaded if they have little information relating to a communication (e.g., McGuire & Papageorgis, 1961) and are not involved or interested in the topic (e.g., N. Miller, 1965; Rhine & Severance, 1970). Similarly, conformity increases to the extent that people lack confidence and perceive themselves as incompetent on a task and to the extent that the task is regarded as difficult, ambiguous, or unimportant (cf. Allen, 1965; Endler, Wiesensthal, Coward, & Geller, 1975). Because of the strong and relatively consistent effects of these variables, it is important to examine whether there are informational and interest differences between men and women that are relevant to the kinds of stimulus materials most commonly used in social influence experiments.

In persuasion research, there is an established tradition of using messages presenting social, economic, or political issues, although other popular choices are university policy issues and medical and health issues (cf. Himmelfarb & Eagly, 1974; Hovland, Janis, & Kelley, 1953; Rosnow & Robinson, 1967). The relevance of these choices to persuasibility sex differences stems from findings that men are more knowledgeable and interested in political and economic areas than are women. For example, public opinion studies (e.g., Nafziger, Engstrom, & Maclean, 1951; Swanson, 1951) have reported that in general men perform better than women on information tests concerning governmental and political matters, and other research (Sloan, Love, & Ostrom, 1974) found that men indicated more interest in politics than

women did. Also, a recent survey of high school students' knowledge of history (Fiske, 1976) yielded superior performance among males, especially on questions pertaining to diplomacy, economic matters, military history, and to a lesser extent, politics.

Interesting in this regard are the topics used in the studies reporting greater female persuasibility. In the Janis and Field (1959) paradigm, a persuasibility index is formed by summing responses to messages on five topics: (a) the advisability of expanding the U.S. Civil Defense Organization, (b) the likelihood of developing a cure for cancer in the near future, (c) the adequacy of von Hindenburg as a German leader and statesman, (d) the advisability of radio stations cutting down on classical music, and (e) the success of a comedian's new TV show. Perhaps the civil defense and von Hindenburg topics, on which females probably had an information deficit relative to males, contributed disproportionately to the persuasibility sex difference. This speculation gains credence from the C. W. Sherif et al. (1973) study, which included the von Hindenburg and comedian topics as well as two new topics, and, despite no overall sex difference, reported a significant difference in the female direction for the von Hindenburg topic. Four of the seven studies reporting females more persuasible but not employing the Janis and Field materials had political or military topics: discontinuing nuclear testing (Furbay, 1965), lowering the voting age to 18 (Paulson, 1954), expansion of federal power (Scheidel, 1963), and nationalization of trade, industry, business, and public services (Singh, 1970). Finally, the importance of content is suggested by the use of nutrition as the communication topic in the Feldman (1974) study, which provided the only report of greater persuasibility among males. With food preparation ordinarily a female duty, nutrition may be a topic favoring the interests and expertise of women.⁶

Similar considerations apply to conformity research. In many experiments, subjects confront opinion items or factual questions. Item content ranges widely, but political and social issues, on which females may be less knowl-

edgeable, are usually well represented (e.g., Coleman, Blake, & Mouton, 1958; Tuddenham & MacBride, 1959). More importantly, Sistrunk and McDavid (1971) have provided an excellent experimental demonstration of the importance of item content in generating sex effects. They pretested opinion and factual items to obtain three types: feminine, masculine, and neutral, according to whether females or males were judged more interested and expert, or the sexes were judged not to differ. Using a questionnaire format attributing discrepant responses to other subjects, Sistrunk and McDavid obtained a significant interaction between subject sex and item type in four separate experiments: On masculine items, women were significantly more conforming than men in three studies; on feminine items, men were significantly more conforming than women in two studies; and on neutral items, there was no difference in three studies, but males were more conforming in the fourth. This research, then, along with Goldberg's (1974, 1975) replications of it, demonstrates that in general, people tend to conform on matters in which their own sex is thought to be relatively uninterested and inexpert.⁷ Moreover, very recently Morelock (in press) obtained similar findings in a persuasion experiment in which topics were relevant to the male or female sex role, and Feldman-Summers, Montano, Kasprzyk, and Wagner (Note 2) confirmed an effect of this type in one of two conformity experiments employing a male- and a female-related discussion topic.

⁶ Feldman's (1974) study controlled for sex differences in specific knowledge by basing the persuasive communication on information items answered incorrectly by both males and females. Nevertheless, the sexes could have differed in interest in the topic and general expertise concerning nutrition.

⁷ The relatively recent Sistrunk and McDavid (1971) study has brought the biased content interpretation to the attention of some textbook writers, who now offer this interpretation in addition to the more common "female role" cultural interpretation. An instructive comparison is between Freedman, Carlsmith, and Sears's treatment in their 1970 text (pp. 239, 332) and the modified treatment in their 1974 second edition (pp. 237-238, 303).

Informational influence considerations should also be raised in relationship to the "perceptual" tasks commonly used in conformity studies. Following in the tradition of Asch's (1956) experiment on judgments of line length, subjects judge physical objects in terms of attributes such as length, area, and numerosity (e.g., Allen & Crutchfield, 1963; Wyer, 1966). Given such tasks, one basis for the greater conformity of females may be males' superiority in quantitative and visual-spatial abilities (cf. Maccoby & Jacklin, 1974). Even though the simplicity of the discriminations usually required in conformity studies probably reduces the impact of ability differences, the quasi-mathematical character of many of these tasks and the burden they place on visual discrimination of spatial relations may put women at a slight disadvantage. The conclusion that task-relevant ability differences may be responsible for conformity sex differences received some support from a study by Nakamura (1958), in which women were more conforming on object-discrimination items but poorer in problem-solving ability, and conformity and problem-solving ability were negatively correlated.

In general, then, both persuasion topics and conformity items are very often somewhat biased toward the interests and expertise of men. Although this factor may account for the slight overall female bias in influenceability findings, it does not explain the tendencies for sex differences to be stronger in group pressure studies and in earlier studies. Experimental materials chosen for group pressure studies do not seem markedly more sex typed than those used in persuasion and other conformity studies, and choice of topics and stimulus materials does not appear to have shifted over the years in any obviously relevant way.

Source of the Induction

In persuasion and conformity studies, influence is exerted by one or more persons, and their identity could have a bearing on influenceability sex differences. Of potential importance to this issue is, of course, the sex of the influencing agent, especially in view

of the fact that communicators in persuasion studies are almost exclusively male (cf. Himmelfarb & Eagly, 1974; Hovland et al., 1953; Rosnow & Robinson, 1967), when information about sex is given. For example, all five of Janis and Field's (1959) "prominent news reporter" communicators were male. Given the general association in our culture between maleness and perceived competence (e.g., Deaux & Emswiller, 1974; G. R. Miller & McReynolds, 1973; Spence & Helmreich, 1972), the choice of male communicators is not surprising, especially in view of the general bias toward somewhat male-oriented topics. Yet this preference for male communicators establishes a cross-sex context for female subjects and a same-sex context for males. In group pressure conformity studies, in contrast, groups are generally composed on a same-sex basis. In conformity studies not involving groups, the sex of the influencing agent is usually not specified, and the deviating opinions or judgments are attributed to general categories of persons (e.g., parents, another group of students).

A limited amount of empirical evidence pertaining to the sex of the influencing agent is available. Among persuasion experiments, an early study by Knower (1935) reported greater opinion change when the communicator and recipient were of different sex, and Haiman (1949) reported a marginally significant tendency for females to be more persuaded than males by a male communicator, whereas with a female communicator, male and female subjects did not differ. Morelock (in press) reported weak tendencies for subjects to be more persuaded by same-sex communicators and for each sex to be more influential on topics pertaining to its own sex role. Whittaker and Meade (1967a) reported a significant effect of communicator sex (male communicator more persuasive) only for an oral but not for a written communication for subjects in only one of five countries investigated. Further, G. R. Miller and McReynolds (1973), Chaiken, Fee, Keenan, and Johnson (Note 1), and Chaiken, Sejwacz, Eagly, Gregory, and Christensen (in press) found no overall effect of communicator sex.

Several conformity experiments varying sex of the source reported no effect (Coleman et al., 1958; Johnson & MacDonnell, 1974; Madden, 1960; Meyers & Arenson, 1968). Yet other conformity experiments found same-sex combinations more effective than cross-sex ones (Crano, 1970), males more effective for subjects of both sexes (Meade & Barnard, 1973, 1975; Whittaker, 1965b), and a female more effective than a male with male subjects (Luchins, 1955). Sistrunk and McDavid (1971) found female sources especially effective with female subjects on masculine task items, particularly if the items were difficult, and Goldberg's (1975) replication found male sources generally more influential on masculine items. Also, Feldman-Summers et al. (Note 2) found that subjects conformed more on male-related topics when the source was male rather than female, but conformed more on female-related topics when the source was female rather than male. Finally, comparing same- and mixed-sex groups, Reitan and Shaw (1964) found subjects of both sexes more conforming in mixed-sex contexts, though Tuddenham, MacBride, and Zahn (1958) reported this finding only for females, with men conforming more in same-sex settings.⁸

Little can be concluded from such a diversity of findings, particularly in view of the generalizability problems inherent in several of these studies' use of only one or a very few influencing agents of each sex. Further, there are theoretical reasons for thinking that the effects of communicator sex will not be understood until they are conceptualized to take into account the message recipient's goals (e.g., Deutsch & Gerard, 1955; Kelman, 1958, 1961). These functional considerations suggest that communicator sex may affect yielding to influence for at least two reasons—its implications for (a) the *informational* issue of the extent to which the communicator is a source of valid information, and (b) the *normative* issue of the extent to which accepting influence facilitates progress toward interpersonal goals such as obtaining liking and admiration from others. If the recipient is concerned with obtaining

valid information, males' usual edge in perceived competence may lend them greater power to influence both women and men. However, if interpersonal goals are primary, other patterns may obtain, depending on the exact nature of these goals. For example, in many contexts, perhaps most clearly if sexual attraction is a major goal, the cross-sex context would ordinarily have the advantage, at least given a minimal level of perceived desirability of the participants. In this regard, it is interesting that Shaffer (1975) demonstrated in an impression-formation context that likability ratings of stimulus persons to whom personality trait adjectives were ascribed were more polarized when stimulus persons were of different sex than when they were of the same sex as the rater. Yet in some contexts—for example, one in which apprenticeship or learning of adult roles is of primary concern—same-sex relationships may enhance both attraction and the effectiveness of attempts to exert influence.

Another consideration with regard to the effects of communicator sex is that normative pressures regulating the overt expression of opinions may vary with the composition of the communicator-recipient dyad. For example, in a traditional setting, males may follow a norm of *chivalry* and therefore show more overt agreement in the presence of a female compared with a male influencing agent. Females may adhere publicly to a norm of *deference to male authority* and therefore show more overt agreement with males than with females. Such pressures may create effects of communicator sex on the behavior of agreeing, and these would be independent of any effects on genuine change of attitudes and beliefs.

If known findings involving communicator sex are considered, for the moment without regard for their potential complexity in terms of social psychological process, certain comments are in order. One point is that occa-

⁸ Studies on volunteering (Bickman, 1974; Tacon, 1965) and on experimenter bias (e.g., Adair, 1972) have reported stronger effects in cross-sex compared with same-sex contexts. Also, Stevenson (1965) usually found verbal social reinforcement more effective when dispensed by a cross-sex experimenter.

sional findings of greater effects in cross-sex settings provide yet another reason to distrust statements that females are the more persuasible sex: Typically, male communicators have been used in persuasion settings. A second point is that the scattered reports of male influencing agents' greater effectiveness vis-à-vis females and males may have implications for group pressure conformity studies, because these have employed predominantly same-sex groups. To the extent that males are the more influential sex, female subjects are ordinarily exposed to less effective influencing agents in conformity studies than are males, and existing findings would underestimate female conformity. Yet if relative competence of source and recipient determines conformity (e.g., Endler, Wiesen-thal, Coward, Edwards, & Geller, 1975), the use of same-sex groups may not create a bias of this type. Of course, the confounding of sex of subject and sex of influencing agent commonly occurring in group pressure conformity studies is unfortunate. Yet in view of the findings reported above, it is difficult to attribute the greater tendency toward female influenceability obtained in group pressure settings, compared with other influence settings, to the impact of the sex of the influencing agent.

A number of other source attributes could have implications for influenceability sex differences. For example, Chaiken et al. (in press) argued that communicator physical attractiveness can have different implications in same- and cross-sex contexts. Although very interesting sex-linked predictions can be generated for this and other communicator variables, it is doubtful that these attributes are important in accounting for the overall pattern of sex differences in past persuasion and conformity studies.

Presence of and Surveillance by the Influencing Agent

Another important contextual consideration, as is evident from the comparison of Tables 2 and 3, is whether influence is exerted in a group pressure context, with the key features of such contexts probably being the physical presence of the influencing agent and the influencing agent's surveillance over

the recipient's agreement response. The idea that the communicator's physical presence and surveillance may enhance female influenceability was also suggested by a recent field study of persuasion (Chaiken et al., Note 1) that obtained a highly significant tendency for females to agree with the communicator more than did males, even though pretest subjects had judged males and females equally expert on the topic of the communication. In contrast with the usual persuasion study's remote communicator, each Chaiken et al. subject met a communicator in a dyadic face-to-face setting, and communicators had direct surveillance over one of the two agreement responses (petition signing) that was obtained.

Other Considerations

A remaining concern in evaluating experimental situations is the task definition given to subjects. For example, Sampson and Hancock (1967), as noted above, speculated that instructions emphasizing achievement accounted for the tendency they obtained for males to conform more than females. Silverman and Shulman (1970) argued that females are more affected by the demand characteristics of attitude-change experiments. Their logic suggests that any tendency for females to be more influenceable than males may be attributable to the laboratory experimental setting in which most studies have been conducted, but the evidence on this point is quite weak. Although questions of task definition are difficult to evaluate without more research, most instructions and task definitions do not seem to be strongly sex typed—with one striking exception. This exception is the quasi-military task description given in three conformity studies yielding sex differences in the female direction (E. P. Hollander, Julian, & Haaland, 1965; Julian, Regula, & Hollander, 1968; Julian, Ryckman, & Hollander, 1969).⁹

⁹ For example, the cover story that Julian et al. (1969) presented to their subjects explained that the researchers were "studying operational conditions encountered by Navy radar and communications crews" (p. 191).

In general, then, there is strong evidence that both the historical period in which research was carried out and the content of the influence induction contribute to influenceability sex differences. The presence of the influencing agent and his or her surveillance over the agreement response may be important, since sex differences appear to covary with these features of situations, too. The evidence concerning the influencing agent's sex is not at all conclusive, and the underlying social psychological issues are more complex and have yet to be addressed appropriately with experimental research. However, neither this variable nor the type of task description provided to subjects appears to be a pervasive factor accounting for the overall pattern of sex differences observed in past influenceability studies.

Process Explanations of Sex Differences in Influenceability

Another approach to interpreting sex differences is to assume that they are at least partially a product of genuine differences between the sexes and not entirely artifacts of contextual features of social influence experiments. Such an approach suggests that influenceability sex differences originate in sex differences in one or more of the psychological processes that underlie reactions to influence. Of course, explanations on the basis of social context and on the basis of underlying processes need not be incompatible: To the extent that sex differences covary with contextual variables, such process explanations need to be capable of accounting for this variation. Among process explanations, there are three main contenders: (a) that the superior verbal ability of females predisposes them to be influenced, (b) that sex roles prescribe differences in yielding, with the female role implying submissiveness to influence, and (c) that females' greater concern with interpersonal aspects of situations, in particular with maintaining social harmony, predisposes them to be influenced.

Sex Differences in Comprehension of Content

There is general agreement among reviews of psychological sex differences that women's

verbal abilities are superior to those of men, especially in teenage populations, which are heavily represented as subjects in social influence studies. This finding is relevant to influenceability sex differences in view of the claim by attitude-change theorists (e.g., Hovland et al., 1953; McGuire, 1969, 1972) that change is a function of comprehension of the content of messages as well as yielding to the positions they advocate. Considerable empirical evidence substantiates the idea that comprehension facilitates attitude change (e.g., Eagly, 1974). Further, individual differences in verbal ability, as assessed by the verbal portion of a standard intelligence test, have been shown to affect opinion change in part via their impact on comprehension of argumentation in persuasive messages (Eagly & Warren, 1976).

The comprehension mediator idea has the advantage, then, of being well grounded in the literature on psychological sex differences. Further, this explanation of influenceability sex differences was favored by McGuire (1969) in his review of attitude theory and research, and his view has been echoed by some textbook writers (e.g., Middlebrook, 1974). Nevertheless, there are two major reasons why the explanation should be discarded. One reason for distrusting it is that it predicts a stronger pattern of differences in the female direction for persuasion than conformity research, since differences in verbal ability are relevant to accepting influence only if messages that are relatively difficult to comprehend are conveyed. In persuasion research, communications often do contain complex argumentation, but in conformity studies, information reception is generally not problematic because the positions taken by the communicators are simply conveyed and not supported by argumentation. Thus, since the interaction between subject sex and type of influence situation tends in a direction opposite to this prediction, comprehension mediation cannot account for this aspect of past findings.

The second reason for rejecting the comprehension mediator explanation of sex differences is that persuasion studies by Eagly and her associates (Chaiken & Eagly, 1976; Eagly, 1974; Eagly & Warren, 1976), utiliz-

ing measures of comprehension and opinion change, have failed to support it. Although females demonstrated a slight but usually nonsignificant superiority in comprehension when assessed by recall of the arguments contained in messages, this difference was too small to carry over to persuasion. In fact, these studies and other evidence (Calder, Insko, & Yandell, 1974; Insko, Lind, & La-Tour, 1976) suggest that the slope of the function relating number of arguments comprehended to persuasion is relatively flat, with the result that a fairly large difference in comprehension is required to exert a detectable effect on agreement with a communication.

Sex Differences in the Tendency to Yield to Influence

By far the most popular explanation for influenceability sex differences is that women yield to social influence because submissiveness is prescribed by the female role in our culture. Thus, women do what they are told to do and believe what they are told to believe because they are expected to do so, and the submissiveness lesson has been ingrained through socialization designed to insure the passivity and dependence of girls and women. Although this argument is plausible in that it mirrors at a psychological level the well-accepted view that women are relatively powerless in our society, it does not account for certain aspects of the data obtained in controlled studies of social influence. At least in its most straightforward application, the sex role submissiveness argument predicts a main effect sex difference, consistent across situations.¹⁰ Yet, as noted earlier, findings are affected by type of social influence situation, with persuasion studies and conformity studies not involving surveillance by the influencing agent providing little support for a sex difference. If females are so well trained to submit to influence, why do they not do so more consistently in a variety of laboratory settings?

One possible answer to this question is that females differ in their acceptance of the traditional feminine role. Especially since the modern resurgence of feminism, many women

may reject traditional role definitions and therefore may not show "feminine yielding" when confronted by an influence induction. This argument has two interesting empirical implications: (a) that more recent studies are less likely than older research to show a difference in the female direction, and (b) that women who value traditional sex roles are more influenceable than women who prefer the contemporary alternative of roles minimally differentiated by sex.

Evidence favoring the first of these hypotheses—the effect of historical period—is presented above. In view of the differences between studies with 1970s publication dates and those with pre-1970 dates, the contemporary growth of the women's movement and the concomitant shift in sex role attitudes (e.g., Mason, Czajka, & Arber, 1976) may signal important shifts in the cultural context in which males and females respond to social influence. Apparently, the psychological meaning of sex has changed so that the equation of appropriate female behavior and yielding is less accepted in very recent years than it was in earlier decades.

The second hypothesis—that females' sex role orientations predict influenceability—has been addressed in several studies. Most of these studies related a measure of masculinity–femininity to either persuasion or conformity, and their findings fail to provide substantial support. Thus, Whittaker's (1965a) replication of the Janis and Field (1959) study included two standard masculinity–femininity scales, but neither related significantly to females' or males' persuasibility. Six conformity studies (Eagly, 1969;

¹⁰ Following logic comparable to that of McGuire's (1968) personality–influenceability model, the yielding hypothesis could possibly accommodate the effect of type of influence setting if it were assumed that settings differ markedly in the pressure they put on people to yield to influence. Then the effect of subject sex might appear primarily in situations exerting moderate pressure to yield. If pressure to yield tends to approximate a moderate level in group pressure conformity settings but not in other settings, an effect of setting on influenceability sex differences would follow. Such an explanation is, of course, impossible to prove or disprove without a priori testing.

Goldberg, 1974, 1975; Sistrunk, 1972; Smith, 1970; Tuddenham, 1959) related masculinity-femininity to conformity. The Eagly (1969) questionnaire study reported that more feminine females (but not males) were significantly more conforming, and the Goldberg (1974, 1975) and Sistrunk (1972) experiments yielded complex effects of masculinity-femininity, contingent on variables such as subject sex, influencing-agent sex, and the closeness of the content of the influence induction to masculine or feminine interests. However, the Smith (1970) and Tuddenham (1959) conformity studies failed to produce significant effects of subjects' masculinity-femininity. Johnson and MacDonnell (1974) assessed subjects' attitudes toward women (Spence & Helmreich, 1972) and found that females' scores did not relate significantly to conformity, although males with more positive attitudes toward women did prove less conforming. Goldberg (1975) included a measure of attitudes toward women's liberation and found a tendency for subjects opposed to liberation to be more conforming than those in favor, but the effect was not consistent across other variables manipulated in the experiment. Bem (1975) related her typology of sex roles to conformity and found feminine subjects of both sexes more conforming than masculine or androgynous subjects. Finally, in a study conducted in Israel, Rosenberg (1962) presented findings suggesting greater persuasibility among culturally traditional subjects.

When pursued at the level of individual differences in sex role orientation, then, the idea that the female role prescribes yielding has received a limited amount of support. The lack of more consistent support may be accounted for at least in part by methodological limitations of the research. One methodological issue is that appropriate assessment of individual differences in sex role orientation remains a topic of considerable debate among psychologists, and masculinity-femininity scales in particular have been strongly criticized (e.g., Constantinople, 1973). Another methodological concern is that it has traditionally proven difficult to account for influenceability on the basis of

personality variables of all types, and findings are generally not consistent across studies correlating a personality measure with a measure of conformity or opinion change (cf. McGuire, 1968). A more sophisticated methodology—either one that employs a measure of influenceability generalized across situations or one that takes relevant situational determinants systematically into account—might yield more promising results (cf. Eagly, in press).

In sum, the very popular idea that sex roles prescribe sex differences in the tendency to yield has mixed support when evaluated in relationship to the existing literature. It does not account readily for the tendency for sex differences to be more prevalent in group pressure conformity compared with other social influence settings. In relation to the two yielding hypotheses derived to account for inconsistencies in past reports of sex differences, support is found for the hypothesis predicting an interaction of sex with historical period, but evidence concerning the predicted interaction with individual differences in sex role orientation is inconclusive and difficult to judge.

Sex Differences in Interpersonal Orientation

Another explanation that assumes that influenceability sex differences are nonartificial is that females are generally more concerned with social relational aspects of group situations than males are, and they are especially concerned with maintaining social harmony and insuring smooth interpersonal relations. This approach assumes that yielding to other people's views is a by-product of females' stronger interpersonal orientation. Although the assumption that going along with others' ideas promotes harmonious relationships may need some qualification, it is probably reasonable to assume that agreement would ordinarily have this effect, at least when its short-run implications are considered. Certainly the positive relationship between similarity of opinions and interpersonal attraction is well documented (e.g., Byrne, 1971). In terms of accounting for past influenceability sex differences, the interpersonal explanation has the advantage of

congruence with the observed tendency for sex differences to run more strongly in the female direction for group pressure conformity studies than for persuasion and other conformity studies. Only in group settings would agreement have the possibility of preserving social harmony and enhancing positive feelings among individuals.

If women conform to promote interpersonal goals of a fairly immediate and short-term nature, this tendency may have stronger effects on the overt expression of opinions than on their genuine change. Thus, the somewhat greater conformity of women in group settings may occur primarily at the level of surface compliance (e.g., Kelman, 1958, 1961) rather than change of cognitions. Not only are the strategic and tactical uses of opinion conformity well documented in social psychological research (e.g., Cialdini, Levy, Herman, & Evenbeck, 1973; Jones, 1964), but there is also some evidence suggesting that females more than males are prone to use opinions in this manner, at least in some settings. Thus, Bass and Duntzman (1964) had subjects give their opinions publicly in five-person single-sex groups and subsequently give their opinions privately after the groups had disbanded. The public and private opinions of women differed more than those of men. Further, women who were "interaction oriented" in terms of Bass's Orientation Inventory had public and private opinions that were more discrepant than those of women classified as more task oriented, whereas men did not show analogous differences. Also suggestive of women's greater strategic use of opinions are (a) Silverman and Shulman's (1970) view, noted above, that females more than males may respond to measures of opinion change in terms of demand characteristics, and (b) findings showing that warning subjects of the content of persuasive messages and of their persuasive intent is more successful in inducing opinion shifts in females, compared with males (Dean, Austin, & Watts, 1971; S. W. Hollander, 1974).

If the literature on psychological sex differences is searched for direct support of the idea that females have a stronger interpersonal orientation than males, unanimous

agreement is not encountered. Although Mischel (1970) and others argued that females display greater social dependency than males, Maccoby and Jacklin's (1974) survey rejected as unfounded the belief that girls are more social than boys. Their conclusion was based primarily on the lack of consistent sex differences in research on a variety of social behaviors (e.g., social learning, empathy and interpersonal sensitivity, social dependency, and patterns of social interaction in natural settings).

Sex differences in research on dyadic interaction and group process. The proposition that females have somewhat different goals than males in group settings should not be discarded too quickly, however, because it is a considerably more specific proposition than the very general idea that females are more "social" than males. For this reason, it is important to probe for differences in interpersonal orientation in the more directly relevant settings provided by studies of dyadic interaction and group process.

Two controlled settings in which sex differences in social interaction have been studied in detail are *coalition formation* experiments and *bargaining* experiments such as those involving the Prisoner's Dilemma game. Findings in coalition studies are generally compatible with the idea that females place greater stress on interpersonal goals: Women's coalition behaviors have been described as more accommodative and oriented toward equity and maintenance of smooth interaction, whereas males are more exploitive and concerned with winning (e.g., Bond & Vinacke, 1961; Senn, 1967; Uesugi & Vinacke, 1963; Vinacke, 1959). In contrast, findings in bargaining studies appear to be, at least at a superficial level, somewhat at odds with the presumption of females' greater commitment to maintenance of smooth interaction (cf. Terhune, 1970). Thus, bargaining studies have often found females less cooperative than males (e.g., Rapoport & Chammah, 1965), although findings are far from consistent. Various interpretations have been offered for the competitiveness of females in gaming situations, and the most promising, in view of empirical data, seems to be the idea that the sex difference is a func-

tion of males' attempts to maximize their winnings, whereas females respond on the basis of the social attributes of the other player (Bedell & Sistrunk, 1973; Kahn, Hottes, & Davis, 1971; J. Z. Rubin & Brown, 1975). Such an interpretation is consistent with the idea that females are oriented more strongly toward interpersonal goals. Also, perhaps the most persuasive interpretation of sex differences in reward-allocation behavior observed in equity experiments (e.g., G. S. Leventhal & Lane, 1970) is that women are more accommodative in these settings, in order to insure a positive social relationship with their partners (Deaux, 1976). Finally, Anderson (1961) reported an interesting finding for a group problem-solving experiment employing same-sex groups composed so that members represented differing ability levels: Females, compared with males, showed a "leveling" tendency whereby they performed similarly despite ability differences. This tendency may well reflect females' greater commitment to friendly noncompetitive interaction.

Although empirical evidence on sex differences in the goals people hold in group settings is quite fragmentary, it is striking that in several laboratory paradigms, sex differences have occurred with moderate consistency and have been given an interpretation along the lines of females placing greater emphasis on insuring positive interpersonal bonds. Such a tendency would seem to imply differences in male and female sex roles of a quite general sort, with females socialized to take greater responsibility for the social-emotional aspects of group process. Although most studies of socialization seem not to have focused on exactly this dimension of behavior (but rather on broad attributes such as dependency), the idea is compatible with the traditional (and often oversimplified) sociological assumption of a functional role differentiation between the sexes along task versus social-emotional lines (e.g., Parsons, 1955; Zelditch, 1955), as well as with numerous discussions of sex roles by personality psychologists emphasizing an instrumental-expressive distinction (e.g., Block, 1973).

In general, then, the interpersonal argument accounts plausibly for one aspect of

influenceability findings—the greater prevalence of female influenceability in group pressure settings. However, the idea is less useful for explaining the effect of historical period, since this effect is not confined to group pressure studies. Studies providing more direct behavioral evidence concerning sex differences in the goals people hold in group situations are supportive of such a sex difference, but the state of the evidence is still somewhat uncertain in this area. Finally, it must be kept in mind that even if the interpersonal orientation explanation is valid, it may imply that women are as resistant to genuine change of their views as men are, but women are somewhat more willing to agree overtly with others when it seems that agreement is useful in order to preserve a smoothly functioning group, to resolve interpersonal conflict, or to cement a bond of friendship.

Conclusion

When all available evidence is considered, the widely accepted idea that there is a sex difference in influenceability consistent across types of influence settings appears to be wrong. There is exceedingly little empirical support for the idea in persuasion studies and in conformity studies not involving groups: The slight trend toward female influenceability in these settings can be readily explained by researchers' tendency to choose experimental materials somewhat biased against the interests and expertise of women. However, in group pressure conformity studies, the evidence for a sex difference is more adequate, with a substantial minority of studies showing a difference in the female direction. It seems unlikely that the contextual features of these group conformity studies are so sex typed that the trend toward stronger sex differences in group situations can be completely accounted for in these terms, although research addressed specifically to this issue is needed. Perhaps women's greater conformity in group settings occurs at the level of behavioral expression of opinions rather than genuine change in cognitions, with females agreeing while in the group in order to preserve social harmony and promote the positive feelings of group members toward one another. Much more

evidence is needed to substantiate such a conclusion, but it appears to account for the way that findings pattern across settings, and it is generally consistent with our limited knowledge of how the sexes differ in several other important classes of interpersonal behaviors.

Given this limited nature of the probable sex difference, it is striking that sex differences in influence-related attributes are such a pervasive feature of social stereotypes concerning the sexes. For example, Broverman, Vogel, Broverman, Clarkson, and Rosenkrantz (1972) found that males, compared with females, were perceived as more aggressive, more independent, more dominant, more able to make decisions, more able to act as a leader, less easily influenced, less uncomfortable about being aggressive, and less dependent. It is implausible to think that these stereotypical sex differences are unrelated to the experiences that people have with men and women in everyday life settings. Social stereotypes are best regarded as concepts held consensually by people of a given culture, and they summarize the information people receive through everyday experience and enable them to make predictions about people who have certain social attributes. Although predictions concerning the behavior of women and men are no doubt subject to a variety of systematic biases similar to those affecting beliefs about other categories of persons (e.g., Chapman & Chapman, 1967; Tversky & Kahneman, 1974), they probably have some overall accuracy.

One possible interpretation of the discrepancy between the influenceability stereotype and the findings reported in this article is in terms of a cultural lag. Since influenceability sex differences were obtained more commonly in decades prior to the 1970s, perhaps current stereotypes encode a social reality that existed at a somewhat earlier period. Also, social stereotypes may encode primarily the behavior of categories of persons who are more traditional in terms of sex roles than are the college students typically serving as subjects in laboratory experiments.

It is also important to note that stereotypes probably reflect quite a different sam-

ple of behavior settings—those common in everyday life—than do research findings, which are most often a product of laboratory settings. One reason this fact is important is that many everyday life situations may have the features of group pressure conformity settings, with the influencing agent present and able to observe the target's reaction. It is in these settings that a more substantial sex difference appears to exist. A second reason that the difference in settings may be important is that the behavior that people observe on an everyday basis is patterned by role expectations and institutional constraints that vary according to sex, whereas in the social influence laboratory women and men take the same role—that of subject. Social stereotypes concerning the sexes may be grounded primarily in the strong sex differences in social role assignment that characterize our society.

Regarding role assignment differences, it can be noted that in most large-scale organizations, men have a near monopoly on positions of power (Kanter, 1975), although both men and women fill the lower ranks. In universities, for example, the proportion of women falls dramatically as one ascends the faculty status hierarchy from instructor to full professor (Rossi & Calderwood, 1973). Women are rarely found in major administrative posts in universities, with the exception of positions (e.g., dean of women) traditionally reserved for women (Ottman, 1970). Thus, in universities, like other large-scale organizations, women more often than men find themselves in the position of receiving directions and orders rather than giving them.

Family life provides another important everyday life setting from which people derive their concepts of men and women. Expert observers of social influence in family settings generally agree that power is not evenly distributed between husbands and wives. For example, Blood and Wolfe (1960) derived an index of power based on common everyday decisions that most families confront, and found that husbands have more power than wives, particularly in middle-class families. Many observers (e.g., Zelditch, 1964) have emphasized that whether the

husband or wife has more power depends on the task, with wives having more influence on decisions such as how much to spend on food, whereas husbands have more influence on decisions such as what car to buy. Still, despite strong sex typing by content area and a gradual shift in the direction of greater equality, husbands have an overall power advantage within the family, both for routine decision making and for conflict resolution (Gillespie, 1971; Scanzoni, 1972).

It is clear, then, that biases in role assignment in our society accord men more power than women, a conclusion repeatedly voiced by feminist writers (e.g., Millett, 1971). However, the literature on sex stereotypes suggests that the ideas people have about women being powerless, influenceable, passive, dependent, and lacking in leadership skills are ordinarily not couched in terms of the social roles they commonly occupy (e.g., secretary, salesclerk, wife). Rather, it seems that people make the "correspondent inference" (Jones & Davis, 1965) that underlying the behavioral sex differences they observe in role-regulated settings are general psychological differences existing at the level of personality traits and abilities. Do people thereby fall prey to the observer's bias (Jones & Nisbett, 1971) by attributing behavior to personality rather than situational pressures?

The special virtue of the laboratory setting with respect to addressing this question is that it is unlike everyday life with respect to confounding sex and role. For this reason, the laboratory provides an excellent setting for demonstrating sex differences that stem from either sex-typed general cultural pressures ("the male role" and "the female role") or physiological differences between the sexes. Because sex differences in assignment to specific roles are removed, the laboratory context makes it possible to determine whether behavioral sex differences are a product of factors other than the immediate constraints of differing roles. Although there is evidence of some genuine sex differences in laboratory settings and suggestive evidence that these differences are grounded in traits or processes related to general sex roles, the weakness of the laboratory evidence favoring sex differ-

ences in most social influence behaviors suggests that influenceability sex differences observed in everyday life settings may be to a great extent a product of the differing particular roles that men and women carry out.

The social-role argument has other ramifications, however. It could be reasoned that because people must, on the whole, be suited to the roles they carry out as adults, a society insures, through appropriate socialization practices, that men and women do differ in personality—in influenceability as well as in other attributes. There is probably some overall truth to the personality–role congruence idea, but it does not necessarily follow that children are socialized to typify broad, general traits, such as influenceability, that would operate across situations. Instead, as Mischel (1970) has argued, children are taught to regulate their behavior according to a complex set of rules that vary according to situational conditions and stimulus variables. Parents rarely reward situation-free versions of behaviors, and they would particularly not do so in relation to influenceability. They would want their children to know how to resist social influence and to yield to it. They would want them to be able on occasion to agree overtly without genuinely yielding, as well as to genuinely yield without overtly agreeing. No doubt boys and girls are taught systematically different rules about when and where to employ these behaviors. For example, women who are taught to value male dominance may regard the marital relationship as a site for yielding and for showing overt agreement without yielding when genuine change of beliefs is not appropriate. But such a male dominance rule would surely be held more strongly for some content areas (e.g., buying a car) than for others (e.g., deciding what constitutes proper nutrition for the family). As role theorists have argued (e.g., Brim, 1960), adequate socialization practices instill knowledge of a variety of behavioral modes and a set of rules specifying what modes are appropriate in what settings. An understanding of influenceability sex differences in everyday settings will follow primarily from detailed knowledge of how these "role–rule models" (Harré &

Secord, 1972) pattern by sex and only secondarily from laboratory studies of persuasion and conformity.

Bias in Expert Descriptions of Influenceability Sex Differences

Finally, a few words are in order concerning social psychologists' characterizations of influenceability sex differences. In view of a systematic sampling of the research literature, most textbook statements are wide of the mark. How can so many experts be so inaccurate, when their own journals repeatedly expose them to empirical evidence that contradicts their generalizations? In view of the effects of historical period, one possible conclusion is that earlier writers were in fact moderately accurate, whereas most contemporary writers are merely out-of-date because their generalizations reflect findings of an earlier period. This defense is less than fully satisfactory in view of most writers' one-sided citations of the literature and their dogmatic claims of very strong and invariant tendencies toward female influenceability. It is tempting to conclude that writers who overgeneralize are poor scholars or that their prejudice against women causes them to distort their characterization of women in an unfavorable direction. Yet it should be remembered that systematic biases have also been noted in reporting social psychological findings (Berkowitz, 1971) and experimental procedures (Rubin, 1974) not related to sex differences. Therefore, a methodologically more interesting interpretation of social psychologists' treatment of this research area can be framed in terms of the biases they share with naive, untrained observers of social behavior.

What needs to be explained is the tendency for social psychologists and other writers to select citations from the relatively small proportion of studies reporting differences in the female direction, while the much larger body of studies reporting no differences is systematically overlooked. This bias might be understood if we assume that psychologists, like naive observers, derive from everyday life beliefs that men and women differ strongly on dimensions of influenceability and

power. Yet psychologists felt obligated to approach the issue with scientific evidence and to do this, turned to their own field's research, which consists largely of controlled laboratory experiments. However, because of the equivalence of males' and females' roles as experimental subjects, the laboratory may be a setting with low ecological validity with respect to the everyday life influenceability sex differences embodied in their concepts of men and women. The idea that the laboratory may be an inappropriate setting for applying these everyday concepts was not considered, nor was the idea that many aspects of observed sex differences might stem from the particular roles occupied by men and women. Skipping over these important analytical steps that would have clarified the very informative role of laboratory evidence, writers then cited those relatively few studies that supported their simple and unelaborated beliefs about a sex difference. Because this biased sample of findings suggested that an unvarying pattern of female influenceability was obtained in the laboratory, psychologists attributed the assumed sex difference to inherent differences in yielding tendencies that characterize males and females socialized in our culture. Although in view of a more accurate portrayal of existing empirical findings, differences in both yielding and interpersonal orientation have some plausibility as explanatory factors, normative factors associated with the particular social roles to which males and females are differentially assigned may be of overriding importance in everyday settings. A good starting point for further investigation of these issues is a detailed understanding of the existing literature and a skepticism concerning scientific generalizations that may be a product of popular beliefs about how the sexes differ.

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