

## Revisiting the issue of safety in numbers: The likelihood of receiving help from a group

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This article re-examines Latané and Nida's (1981) meta-analysis on the inhibiting effect of groups on helping behavior and highlights the distinction between social inhibition and a victim's likelihood of receiving help. Correcting a minor miscalculation in one of Latané and Nida's analyses indicated that, under restricted communication among bystanders, victims were significantly more likely to receive help from a group than from an individual. New correlational analyses indicated that as group size increased, the likelihood of receiving help increased under restricted communication and did not change under full communication. I address several implications of these new findings, including those regarding the case of Kitty Genovese and the role of communication type in bystander intervention. I also briefly report on recent studies on online requests for help.

One of the best-known findings in social psychology is the *bystander effect*, in which a greater number of bystanders inhibits helping in an emergency (Darley & Latané, 1968). The interest in this finding seemed due to the commonly held but now questioned notion of safety in numbers. In the classic case of Kitty Genovese and other examples, victims did not receive timely help despite numerous bystanders (Myers, 2005). Reviewing more than 50 studies, Latané and Nida (1981) established that the bystander effect had "withstood the tests of time and replication" (p. 322). This conclusion is unchanged today. Recent assessments of research on bystander helping behavior typically refer back to Latané and Nida's meta-analysis or to one or more of the early classic works (e.g., Darley & Latané, 1968; Latané & Darley, 1970).

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However, this article notes an apparent error in one of Latané and Nida's (1981) analyses. Correcting a minor miscalculation revealed that, under *restricted communication* (in which bystanders "are separated yet know of each other's presence"; Latané & Nida, 1981, p. 320), victims were actually more likely to receive help from a group than from an individual. In addition, new correlational analyses indicated that as group size increased, the likelihood of receiving help increased under restricted communication and did not change under *full communication* (in which bystanders could see or communicate with one another). This article addresses the implications of these new findings and emphasizes a relatively unappreciated distinction between *social inhibition* (the reduced probability that an individual will help as number of bystanders increases) and the *likelihood of receiving help* (the probability that a victim will receive help from at least one bystander). The new findings only pertain to the likelihood of receiving help. Although support strongly remains for Latané and Nida's focal argument of social inhibition, the direct connection between likelihood of receiving help and the notion of safety in numbers underlies the potential importance of the new findings.

Latané and Nida (1981) argued that an actual victim "is not likely to be concerned with any given bystander's likelihood of giving assistance but simply with whether *anyone* helps" (p. 310). In other words, a victim is less concerned with social inhibition than the likelihood of receiving help, the latter of which seems to constitute the degree of safety in numbers. Latané (1981) actually argued that there is a "purely mechanical potential for getting more help with more people" (p. 350). However, at the same time, the average probability of helping among those people tends to decrease (social inhibition), for reasons including diffusion of responsibility (i.e., shifting responsibility to others). Thus, there can be group situations in which social inhibition occurs but a victim is still more likely to receive help from someone in the group than from a single bystander. This distinction between social inhibition and likelihood of receiving help is often blurred. In fact, some articles and undergraduate texts define the bystander effect solely in terms of a reduced likelihood of receiving help.

### NEW FINDINGS ON THE LIKELIHOOD OF RECEIVING HELP

Latané and Nida (1981) divided studies into two categories: (a) when participants were alone versus in bogus groups (confederates or presumed others), which included studies that used either restricted or full communication, and (b) when participants were alone versus in actual groups under full communication. In both categories, to assess the effect of groups on the likelihood of receiving help, Latané and Nida compared the proportion of groups helping ( $P_G$ ; in which at least one group member helped) with the

TABLE 1

Mean likelihood of receiving help as a function of bystander group size and group type

Group size	Group type		
	Restricted-communication bogus	Full-communication bogus	Full-communication actual
1 <sup>a</sup>	80% (13)	80% (17)	61% (32)
2	87% (10)	68% (22)	51% (24)
2.5	—	—	53% (3)
3	91% (4)	63% (6)	49% (4)
3.5	—	—	100% (1)
4	84% (3)	86% (3)	—
5	93% (5)	99% (1)	58% (4)
8	99% (1)	—	—

Notes: Percentages ( $P_G$  for group size  $>1$ ,  $P_A$  for group size = 1) refer to the proportion of groups in which at least one group member helped. Fractional group sizes represent the midpoint of the range of group sizes reported by Latané and Nida (1981) for a study (the authors reported ranges for eight full-communication actual-group studies used in correlational computation, the midpoint of four of which was a whole number). In parentheses is the number of  $P_G$ s (or  $P_A$ s) on which the mean  $P_G$  (or  $P_A$ ) was based. Dashes indicate that no study was reviewed for that group size under that group type. Mean percentages were calculated from the raw data provided in tables by Latané and Nida. (See Footnote 3 [overleaf] for other notes regarding correlational computation.)

<sup>a</sup>Group size of 1 indicates the alone condition. Mean  $P_A$ s reported here for this condition differ slightly from the mean  $P_A$ s used in the reported matched-pair  $t$  tests, because some studies provided more than one group condition which necessitated reusing  $P_A$ s from the alone condition for such tests. Thus, the mean  $P_A$ s used in  $t$  tests were based on slightly larger  $N$ s.

proportion of alone participants helping ( $P_A$ ).  $P_G$  could be directly observed in studies with actual groups but was estimated for bogus groups.<sup>1</sup>

Latané and Nida (1981) found an inhibiting effect of groups under full communication. Using matched-pair  $t$  tests, full-communication bogus- and actual-group  $P_G$ s were significantly less than respective  $P_A$ s. Restricted-communication bogus-group  $P_G$ s ( $M=89\%$ ) did not significantly differ from  $P_A$ s ( $M=84\%$ ),  $t(22)=1.49$ ,  $p>.10$ . However, a recalculation in the restricted-communication comparison revealed a significant reversal of the inhibition effect: The mean  $P_A$  was 82% (rather than the reported 84%),

<sup>1</sup> Because bogus groups contained only one true bystander, Latané and Nida (1981) estimated  $P_G$  in each pair of proportions to approximate what would happen if those groups were real. The authors did so by using a "simple binomial model based on the size of the group and the probability that an individual in that group will help" (Latané & Nida, 1981, p. 310). For each estimate, a table provided group size ( $N$ ) and the proportion of participants who helped from that bogus-group condition ( $P_f$ ). The formula derived from this binomial model is  $P_G = 1 - (1 - P_f)^{1/N}$  (Latané & Nida, 1981, p. 310), from which one can isolate and solve for  $P_G$  as necessary. Other articles similarly used this formula (e.g., Darley & Latané, 1968; Latané, 1981).

which the mean  $P_G$  (89%) significantly exceeded,  $t(22)=2.34$ ,  $p<.03$ . Combining all group types,  $P_G$  was significantly less than  $P_A$ .<sup>2</sup>

A correlation between group size and likelihood of receiving help ( $P_G$  for group size  $>1$ ,  $P_A$  for group size  $=1$ ) can measure the effect of group size without combining groups of two or more individuals into one category. Using restricted-communication bogus groups, the likelihood of receiving help significantly increased as group size increased ( $r=.34$ ,  $p<.05$ ). The correlation neared zero using full-communication bogus ( $r=-.03$ ) and actual groups ( $r=-.05$ ; see Table 1). Overall, there was a small positive correlation ( $r=.13$ ,  $p=.112$ ).<sup>3</sup>

## DISCUSSION AND IMPLICATIONS

The overall (slight) rise in the likelihood of receiving help as group size increased might simply reflect the “purely mechanical potential” for more help with more observers (Latané, 1981, p. 350). Although this pattern might sound uninteresting or obvious, it is precisely this obvious aspect of the notion of safety in numbers that made the Genovese case and Darley and Latané’s (1968) study, which countered the pattern, so surprising and impactful (e.g., Fiske, 2003). The positive correlation between group size and likelihood of receiving help reached significance using restricted-communication bogus groups. This correlational finding coincides with the new  $t$ -test finding, in which restricted-communication bogus groups of varying sizes were more

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<sup>2</sup> S. Nida has confirmed the new finding (personal communication, July 2, 2001). As deduced by an anonymous reviewer and independently by S. Nida (personal communication, July 16, 2007), the minor miscalculation of the mean  $P_A$  (based on 23  $P_{As}$ ) seemed due to adding in a 24th  $P_A$  (from a study that did not provide a  $P_G$ ) before dividing by 23.

<sup>3</sup> I did not include in correlational computation the  $P_G$  attributed to studies by Piliavin and colleagues, because Latané and Nida (1981) also excluded it from their matched-pair  $t$  test due to the absence of an alone condition. Matching Latané and Nida’s exclusions can demonstrate the different statistical outcomes between correlations and  $t$  tests using the same set of data. Including that  $P_G$  value lowered the overall correlation from  $r=.13$  to  $.11$  ( $p=.192$ ), and changed the full-communication actual-group correlation from  $r=-.05$  to  $.03$ . Latané and Nida were unable to report group size for two restricted-communication bogus-group studies, whose authors reported the number of presumed others conveyed to participants as “many” (Thalhofer, 1971) or “several” (Krupat & Epstein, 1973). However, for Thalhofer’s (1971) study, Latané and Nida still reported a  $P_G$  of 99%, the computation of which (using the formula in my Footnote 1) would have required a bogus group size of 8, which I used in the correlational analysis. Using the same size of 8 for “several” (leading to a  $P_G$  of 100%) raised the overall correlation from  $r=.13$  to  $.16$  ( $p=.052$ ) and raised the restricted-communication bogus-group correlation from  $r=.34$  to  $.40$  ( $p<.02$ ). Latané and Nida’s Table 1 reported that there were 5 presumed others (for a group size of 6) in Schwartz and Gottlieb’s (1976) procedure, but there were actually 4 others (for a group size of 5). I used the group size of 5 in correlational analyses (also apparently used by Latané and Nida to calculate  $P_G$ s for that study). Lastly, the group size reported for eight actual groups (none of which was under restricted communication) was a range (e.g., 2–3), in which case I used the midpoint (e.g., 2.5) in correlational analyses.

likely to help than single observers (although the difference was small). Thus, it turns out that people's intuition that one should be more likely to receive help from a group may not be completely wrong.

Even using full-communication groups, the new correlational findings indicated no effect of group size on the likelihood of receiving help. These near-zero correlations do not support the notion of safety in numbers. However, neither do they support the opposite notion of less safety in numbers, the common meaning of the bystander effect and the conclusion by Latané and Nida (1981): "In general, a victim does seem to stand a greater chance of receiving assistance when only a single individual witnesses his or her plight" (p. 322). Complicating interpretations, the *t* tests that required dichotomizing the group size variable (by combining groups of two or more individuals into one category) demonstrated that full-communication groups and groups overall were less likely to help than single bystanders. These findings justified Latané and Nida's (1981) general conclusion. However, since 1981, statisticians have strongly recommended against dichotomizing quantitative measures (such as group size) in favor of conducting correlational or regression analyses (e.g., MacCallum, Zhang, Preacher, & Rucker, 2002).

It might also be worth noting that Latané and Nida (1981) conducted unweighted analyses (weighting each comparison equally) and that weighting by sample size yielded slightly different results. According to the weighted summary data in Latané and Nida's tables, the group helping response was greater than or equal to the alone response, consistent with the new correlational findings. Latané and Nida acknowledged this difference between weighted results (slightly favoring the group response) and unweighted results (slightly favoring the alone response) and based their conclusions on the latter, which had justification. However, other factors might also justify a weighted approach. It may not be fair to argue for one meta-analytic strategy over another 25 years later (when meta-analyses are much more common). However, the differing conclusions based on strategy choice in combination with the new findings might make it difficult to draw general conclusions about the likelihood of receiving help.

### The case of Kitty Genovese

The new findings under restricted communication are particularly significant because they might pertain to the often-cited case of Kitty Genovese, an impetus of Darley and Latané's (1968) seminal work. Darley and Latané described Ms. Genovese's bystanders as knowing "that others were also watching" but having "no way to tell how the other observers were reacting" (p. 377), constituting restricted communication by Latané and Nida's (1981) definition and dictating Darley and Latané's restricted-communication procedure (using bogus groups). Because Kitty

Genovese did not receive help, this case appears to be an exception among restricted-communication groups (given the new findings that restricted-communication groups tend to be safer than single bystanders). Thus, the Genovese case might deserve further examination.

For example, perhaps because of the extreme nature of the event, single bystanders would have behaved the same way, constituting a floor effect. However, one bystander apparently did shout to leave Ms. Genovese alone (Hockenbury & Hockenbury, 2003), rarely noted in references to the Genovese case. Whether this bystander action constitutes some minimal form of intervention seems worth discussion. Perhaps one can argue that this restricted-communication group did “help” after all because at least one member “responded” (although clearly the response was not sufficient to save Ms. Genovese), more consistent with the new restricted-communication findings. Perhaps one can also argue that if the other bystanders heard the shout, then the group should be reclassified as full-communication. Adding the Genovese case to the full-communication category suggests that restricted-communication groups have gone nearly unnoticed in general references to the bystander effect, because the other commonly cited cases are more clearly full-communication (e.g., see Latané & Darley, 1970; Myers, 2005). Thus, perhaps bystander research needs to turn more of its explicit attention to restricted-communication groups (e.g., individuals in separate apartments, offices, or classrooms).

### Diffusion of responsibility may not be sufficient

To help understand why restricted-communication groups might be more helpful, consider Latané and Nida’s (1981) three factors in the inhibiting effect of groups: *audience inhibition* (fear of negative evaluation from others), *social influence* (conforming to the inaction of others or reinterpreting the situation due to the inaction), and *diffusion of responsibility* (feeling less personal responsibility to act by shifting responsibility to other bystanders). In restricted-communication contexts, Latané and Nida argued that only diffusion of responsibility operates. Thus, a primary implication of the new findings is that diffusion of responsibility by itself might not be strong enough to overtake factors that increase or facilitate helping behavior in restricted-communication groups. Future research could explore such facilitative factors.

A primary factor that could increase helping in any group is the raw power of numbers (Latané’s, 1981, “purely mechanical potential” for more help with more observers, p. 350). An additional factor might be simple conformity to a helping norm. Perhaps not being able to see others but knowing they are present (i.e., having restricted communication) increases such conformity in a way that full communication does not allow. In general, helping someone in need constitutes a social norm (e.g., see Darley & Latané, 1968; Rutkowski,

Gruder, & Romer, 1983), and being with others can increase pressure to conform to norms. Although a full-communication group should exert even greater pressure, the perceived norm in such groups might switch to one of inaction due to observations of inaction in others. Relatedly, the helping norm probably reflects or dictates a helping self-standard, and being in a public context can increase one's attention to self-standards (e.g., Carver & Scheier, 1978). Even if full-communication contexts similarly increase self-attention, Gibbons and Wicklund (1982) showed that self-focused attention only increased helping behavior when "the situation clearly calls for acting on a helping norm" (p. 472). In full-communication groups, this "call" is more likely to be muffled or reversed than in restricted-communication groups, because of the competing norm of inaction and the greater likelihood of reinterpreting the situation due to the inaction of others.

Thus, although my reasoning is speculative, a suggestion that arises from the new findings is to conduct research that measures or manipulates such norms or self-standards under restricted versus full communication. Bystanders might report stronger helping self-standards under restricted than full communication. Experimentally increasing salience of the norm or attention to self-standards might have greater effect under restricted than full communication. Suggestive of this outcome, Rutkowski et al.'s (1983) demonstration that the salience of a helping norm increased helping behavior used restricted-communication groups. Among Latané and Nida's (1981) reviewed studies, the one that showed the greatest difference (43%) favoring the restricted-communication group over the alone response (Horowitz, 1971) used "members of social-service groups for whom the norm of helping is presumed to be a primary group norm" (Rutkowski et al., 1983, p. 551). In general, bystander research can further consider the variable of communication type as well as the explicit issue of the likelihood of receiving help.

### REAFFIRMING SOCIAL INHIBITION

Compared to likelihood of receiving help, Latané and Nida's (1981) findings regarding social inhibition painted a clear picture. These social inhibition findings comprised comparisons between  $P_A$  (the probability that an individual who is alone will help) and  $P_I$  (the probability that an individual in a group will help).<sup>4</sup> In the great majority of studies,  $P_A$  exceeded  $P_I$ .

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<sup>4</sup> Whereas  $P_I$  is the within-group individual's probability of helping (referred to in bogus groups as the "proportion of subjects in groups helping"; Latané & Nida, 1981, p. 312), recall that  $P_G$  is the probability that a group contains at least one individual who helps. In the actual-group category, Latané and Nida (1981) estimated  $P_I$  using the formula in my Footnote 1, arguing that in actual-group contexts, "once someone has offered help, the same action by anyone else no longer has the same meaning" (p. 310). Thus, it would be uninformative to calculate  $P_I$  simply from the percentage of group members who help.

Latané and Nida also reported stronger social inhibition under full than restricted communication. New correlational analyses also indicated that as group size increased, individual probabilities ( $P_I$  for group size  $>1$ ,  $P_A$  for group size = 1) decreased (for restricted-communication bogus groups and full-communication bogus and actual groups,  $r_s = -.53$ ,  $-.39$ , and  $-.52$ , respectively;  $p_s < .01$ ). The presence of others clearly reduced the individual's probability of helping.

### ONLINE REQUESTS FOR HELP

Several recent studies investigated effects of recipient group size on student response to e-mail or internet-based requests for help from another student, three of which allowed for investigation of the likelihood of receiving help (Barron & Yechiam, 2002; Blair, Thompson, & Wuensch, 2005; Yechiam & Barron, 2003). The online context constituted an especially clear form of restricted communication. Also, unlike Latané and Nida's (1981) restricted-communication groups, which were all bogus, two of these online studies used actual groups (Barron & Yechiam, 2002; Yechiam & Barron, 2003). I analyzed provided data and found clear support in each study for the new restricted-communication result from Latané and Nida's review: As group size increased, the likelihood of receiving help increased. Also, as group size increased, the individual's probability of helping decreased, again supporting social inhibition.<sup>5</sup>

### LIMITATIONS

It should be noted that there might be differences between the reviewed restricted- and full-communication studies beyond communication type that relate to the likelihood of receiving help. Thus, statements of a causal role for communication type need some qualification. Although 15 studies reviewed by Latané and Nida (1981) provided (through their procedures) numerous restricted-communication examples, an important question is how likely these examples are to occur in "real life." Also, how does their number compare to full-communication examples, which might be more common? In any case, this article claims new findings under both restricted and full communication, although the near-zero correlations under full communication constitute null findings, which are more difficult to interpret.

### CONCLUSIONS

Latané and Nida (1981) found clear evidence for social inhibition. An individual is less likely to help a victim while in the presence of other bystanders than while alone. This effect of groups has far-reaching

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<sup>5</sup> Interested readers can contact the author for a complete report of these results.



implications. However, this phenomenon is separate from the issue of the likelihood of receiving help. Latané and Nida importantly distinguished these two concepts, but some articles and texts inadvertently sidestep this distinction, contributing to possible misconceptions among students and researchers. The likelihood of receiving help from a group (i.e., the degree of safety in numbers) represents the balance between social inhibition and what can be called the power of numbers. The crucial question is “whether the increases in probability of receiving help due to the increased availability of helpers [power of numbers] is great enough to outweigh the decrease in each helper’s individual probability of giving help [social inhibition]” (Latané & Nida, 1981, pp. 321–322). The answer seems to be yes under restricted communication (including computer-mediated communication), which is the primary contribution this article tries to make to the bystander literature. Even with social inhibition, victims are sometimes more likely to receive help from a group. Results under full communication depended on the type of analysis. Thus, the general question of safety in numbers seems relatively unresolved or has a mixed answer. It is hoped that this article encourages further review and research on this topic.

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