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Jakub Kuś[1], Agata Kocimska-Bortnowska[1]

[1] *SWPS University, Wroclaw, Poland*

CORRESPONDING AUTHOR - Jakub Kuś, jkus@swps.edu.pl

Using Social Influence Technique as a Tool to Reduce the Diffusion of Responsibility on the Internet

Abstract: Diffusion of responsibility is a well-known effect widely studied in a real-life setting. It can occur in a situation in which the more people observe a crisis event, the less likely it is that someone will react and provide real assistance. These days of a galloping digital revolution a question is to be raised as to whether the same effect can be observed in the online space of communication. In order to investigate this phenomenon we designed a study aimed at testing whether people exposed to a situation of cyberbullying will decide to take action against it depending on how many other Internet users are also aware of that crisis. Results obtained by us confirmed the existence of the diffusion of responsibility in the Internet similar to that observed in our daily lives. We also confirmed that a well-known influence technique "Even a penny will help" (in our study "every reaction will help") can be effectively used to model behaviour online. In our times of digital revolution, those outcomes can be a step both toward understanding human behaviour in the online setting, showing us that it is not that different from the one presented in real live face-to-face communication and toward helping deal with antisocial behaviour people face online on a daily basis.

Keywords: *social influence, diffusion of responsibility, experiment, applied social psychology*

The digital revolution has fundamentally transformed the modern world. An increasing number of everyday activities have shifted to the online realm, making the Internet a normative space for human functioning. Along with these changes, even crisis situations such as aggression, hate speech, contempt, or cyberbullying have also migrated to the Internet. Although many Internet users often witness such events − for instance, when someone becomes a victim of a cruel verbal attack, they rarely decide to intervene, defend the victim or alert the administrators of the platform where the aggression is occurring. This phenomenon is well known in social psychology as the "bystander effect" (Cieciura, 2016**;** Darley & Latané, 1968; Latané & Darley, 1970; Latané & Nida, 1980; Valentine, 1980, which describes a situation in which the more people observe a crisis event, the less likely it is that someone will react and provide real assistance.

Despite being studied for over half a century, the nature of diffusion of responsibility in computer-mediated communication raises questions about whether the dynamics of the online bystander effect share the same patterns as those offline. Moreover, an essential question is how to prevent this process or how to halt and mitigate its negative consequences such as online hate, and whether specific techniques of social influence can be employed for this purpose. The present paper experimentally addresses this issue.

DYNAMIC OF DIFFUSION OF RESPONSIBILITY

According to the classical Intervention Decision Model, in order to make a decision to help someone in a crisis situation, five stages must be completed. Firstly, the situation must be noticed. Secondly, it should be interpreted by the observer as genuinely crisis-inducing, which can be challenging and sometimes distorted in certain situations. As demonstrated by Piliavin et al.

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(1969), the more elements that somehow justify an event , the lower the chances of it being recognized as a crisis. Thirdly, the observer should assume personal responsibility for a reaction. As shown by Flynn and Lake (2008), this is relatively the most difficult stage, but the probability of accepting personal responsibility significantly increases when the victim directly asks a specific person (the observer) for a reaction and assistance. The fourth stage is knowledge regarding how to help (what exactly should be done). The fifth stage is taking action.

It is also worth noticing that crisis situations, in which diffusion of responsibility can occur, differ in their level of danger. Latané and Nida (1981) divided them into four categories. The first category includes situations that involve a sense of common threat for all observers, meaning that if no one reacts, everyone will suffer (Latané & Darley, 1968; Ross & Braband, 1973). The second category consists of situations in which the victim is in individual danger, such as an asthma attack (Harris & Robinson, 1973) or an epileptic seizure (Darley & Latané, 1968). The third category includes criminal acts committed by other people − for example, a theft of money observed by the bystander (Latané & Elman, 1970) or a book theft (Howard & Crano, 1974). The last category described by Latané and Nida (1981) are non-emergency incidents, which refer to simple everyday situations like leaving a tip at a restaurant (Freeman et al., 1975) or holding the doors open for someone (Levy et al., 1972).

In the summary of their meta-analysis, Latané and Nida (1981) emphasize that one of the most common elements of the diffusion of responsibility process is the fact that it becomes stronger when the situation is unclear and difficult to interpret. This corresponds to the second stage of the Intervention Decision Model, which concerns the accurate understanding of a situation (Darley & Latané, 1968). Latané and Nida (1981) draw attention to the fact that the phenomenon of responsibility diffusion is stronger in densely built urban areas.

Fischer et al. (2011) point out that certain very risky and potentially difficult situations may paradoxically not lead to a diffusion of responsibility. Harari et al. (1985) demonstrated that in a simulated incident of a rape attempt in a parking lot, most of the participants were more likely to react when they were surrounded by other people than when they were alone. Fischer et al. (2011) claim that in clear and dangerous situations for the victim, the psychological costs of refusing help are very high. This may act as an effective remedy for the diffusion of responsibility. Another factor that reverses the dynamics of responsibility diffusion in dangerous situations, as defined by Fischer et al. (2011), is the sense of mental support from other witnesses. This is particularly important when there is a risk that the perpetrator of an emergency incident (e.g. an assault) may also attack the intervening person (Horowitz, 1971). In such a context, the realization that others will support them even if they intervene and react may be crucial in taking action.

Piliavin et al. (1981) presented a complex concept of balancing the costs of reacting or not reacting in an emergency incident. Formulating it as a bystander-calculus model, they concluded that providing help is motivated by the interpretation of an emergency incident as the best way to alleviate unpleasant emotions that arise from witnessing someone's misery. This model is based on three primary assumptions: 1) noticing an emergency incident evokes emotional excitement in a witness, which increases with the dramatic nature of the situation, its clarity, and duration; 2) this emotional excitement is unpleasant for the witness; 3) the witness seeks to alleviate this excitement with the most beneficial subjective balance of benefits and costs. The model presented by Piliavin et al. (1981) defines two types of costs − those related to providing help and those related to refraining from doing so. A bystander has the greatest chance of reacting to an emergency incident when the costs of providing aid are small, while the costs of not helping are significant. Examples of costs specified by Piliavin et al. (1981) include exertion, time or putting oneself in potential danger. They also classify lower self-esteem, negative reactions from others and self-blame for not helping someone in need as costs of refraining from helping and reacting. Dovidio (1984), based on a review of more than a dozen studies related to the diffusion of responsibility, came to the conclusion that the costs of providing aid are more significant. The costs of refraining from helping are usually influential in terms of behaviour only when the costs of providing help are small.

DIFFUSION OF RESPONSIBILITY ONLINE

In the past two decades, research has also been conducted on the diffusion of responsibility specifically in the online environment. One of the first studies in this line of research was conducted by Barron and Yechiam (2002), who demonstrated that the more visible the recipients of an email, the lower the likelihood that someone will respond to it. Similar results were obtained by Blair et al. (2005). The results of research conducted with this method indicate that recipients do indeed decide to comply with the emailed request more often when they see that they are its only addressee. However, it is important to note that these studies only focus on one category of emergency incidents as distinguished by Latané and Nida (1981), which they described as "non-emergency incidents". It is therefore necessary to consider the fact that failing to comply with a request formulated via email, such as completing a survey, does not have the same dramatic consequences as refraining from providing aid to a victim of aggression or a serious accident.

An interesting study was also conducted by Markey (2000), who examined the dynamics of responsibility diffusion in an online chat environment. The findings were in line with the expectations, showing that the more people were logged into a simulated chat, the longer it took for someone to respond to a request for help made on the main communication channel of that chat. If an Internet user saw that many other users could see the request for help, they were much slower to react, if they reacted at all.

Kozlov and Johansen (2010) demonstrated that the diffusion of responsibility can even happen in a video game. The participants in their experiment had to get out of the constructed, virtual labyrinth as quickly as possible. At the same time, they were given information about other people taking part in the game. When a participant appeared in one of the rooms of this virtual labyrinth the number of other "people" present in this particular room was manipulated. The participant was asked for help with getting out of the labyrinth by another supposed user. The results showed that the greater the number of virtual people who witnessed such a request, the less likely the participants were willing to fulfil it.

One of the latest studies related to the diffusion of responsibility on the social media websites was conducted by Martin and North (2015). These authors also indicated that there is no difference in the reactions of the participants when they see that the request was viewed by 4 or 14 other witnesses – in both of these cases a similar diffusion effect appears. Similarly, in the situation where the participant was given information that their request had been viewed zero times or one time. Another important conclusion from the aforementioned authors' research is the fact that the phenomenon of responsibility diffusion did not occur in the case of the request to donate to charity. It turned out that the number of people observing such a request being made did not differentiate the decision on whether to support something financially. The authors themselves, however, point to the fundamental weakness of their study – the social networking website the participant "entered" was only a graphical simulation, a model pretending to be a real website, which made them have no way of starting real interactions. It may also be assumed that the participants realized that it was not a real social networking site, which could also have had an impact on the results.

MECHANISMS OF REDUCING DIFFUSION OF RESPONSIBILITY

Kleinsasser et al. (2015) conducted a study where they tested the effectiveness of their original "Take Care" program, which is aimed at counteracting the diffusion of responsibility towards sexual violence. The program designed by the authors contains the presentation of numerous emergency events and a whole range of ways and ready-made solutions that may be used to effectively react in a given case. The results obtained by them demonstrated that the presentation of such material truly raises the probability of reacting in the face of witnessing an emergency incident. Although, as Cugelman et al. (2011) emphasize, such interventions may also be used online, e.g., to assist in giving up smoking or alcohol, but it will be effective only if conducted with a precise consideration for the specifics of the Internet environment.

An important question in the discussion of mechanisms for reducing the bystander effect is how the victim should ask for help to ensure that assistance is both provided and maximized in its effectiveness. One way to achieve this is by employing an appropriate technique of social influence. Nowadays, these techniques are categorized based on the psychological mechanism they are designed to activate (Doliński, 2016; Doliński & Grzyb, 2023). Some of these influence techniques are relatively simple and involve, for example, adding a specific additional statement to the request. It has been found that even a single additional sentence can significantly increase compliance (Grzyb & Doliński, 2017; Knowles & Linn, 2004).

Cialdini and Schroeder (1976) demonstrated that when they added the phrase "Even a penny will help" to a standard request for assistance (in their study, a request for a donation to fight cancer), participants donated significantly more money. As the mentioned authors point out, supplementing a request with such a phrase practically eliminates rational arguments for not helping. If even a penny will help, then it becomes challenging to refuse such a request because it negates the economic motivation for not providing assistance ("I don't have the money for it") (Fraser et al., 1988).

What is particularly noteworthy is that the above-described technique works not only concerning money. Research has shown that it is effective, for instance, when conducting a field experiment and asking people to take a leaflet. Doliński et al. (2005) used a slightly modified version of the original phrase, using it as follows: "every distributed leaflet counts". The results obtained by these authors demonstrated a significant increase in the number of individuals who took more than one leaflet from the experimenters after the application of this influence technique.

As it turns out, the strategy originally developed by Cialdini and Schroeder (1976) can be successfully adapted to situations beyond economic ones. The essence of this influence technique is to draw the participant's attention to the fact that even a small gesture, which does not require significant commitment or effort, can be an effective tool for helping others. In our experiment, the results of which we describe in this article, we applied the technique with the variant "every reaction will help", assuming it to be an effective tool to encourage participants to respond when they witness harm happening to someone else.

SIMULATION OF SOCIAL MEDIA NETWORK

The aim of our study was to create real (seemingly) crisis situations that could potentially be noticed by the participants on a simulated social media platform. Considering that a large number of studies in this area focus on the diffusion of responsibility in situations that can be characterized as non-emergency incidents, we wanted to observe the reactions of the participants when they witness someone experiencing real, significant harm in the online space. For this purpose, we used the "Social Lab" software (Garaizar & Dietrich-Reips, 2014), which is an Internet-based free and open-source social network software

system. As the authors emphasize in the official description of their tool:

> "Social Lab allows researchers to investigate behavior in social media on an individual and group level. Automated artificial users are available to the researcher to simulate and stimulate social networking situations. These bots respond dynamically to situations as they unfold. The bots can easily be configured with scripts and can be used to experimentally manipulate social networking situations in Social Lab." (Garaizar & Dietrich-Reips, 2014, p. 430)

Social Lab also allows the simulation of the elements, such as the apparent number of views of a particular content. The functionality of the Social Lab software has been confirmed in other studies in this field (e.g. Gordillo et al., 2021). For the purposes of the current experiment, a Polish version of Social Lab was prepared, and a modification was introduced to enable online research procedures. Initially, Social Lab could only be used for stationary research in a laboratory setting.

THE GOAL OF THIS STUDY

The main research questions were as follows: Will the application of a social influence technique, which involves adding the phrase "every reaction will help" to a request for assistance, result in people responding more frequently when they see someone in need of their help? The following hypotheses were put forward:

H1: Diffusion of responsibility will be smaller in the condition where the participants will be informed that they are the only ones that spotted this crisis situation, than in the condition where many other individuals also spotted it.

H2: Diffusion of responsibility will be smaller in the condition where the question for help will be enriched with a phrase "every reaction will help", than in the condition without this additional sentence. We anticipated to observe both main effects of diffusion of responsibility and an added phrase as well as the interaction effect.

STUDY

Method

Participants

One hundred and sixty-eight participants (113 women, 51 men, 4 participants choose "different gender"; *M*age = 24.56, *SD*age = 6.16), 19 to 45 years of age, agreed to take part in the experiment. All participants were Polish natives. Participation in the study was voluntary. Gratification was provided in the form of a food coupon for a nearby university restaurant.

Procedure

The experiment was conducted online between April and June 2023. This study was approved by the local ethics committee. The participants were informed that their participation in the experiment was fully anonymous and that the study was about the psychology of social networking.

Each participant was given a link to a short metric questionnaire, which consisted of questions about age and gender, as well as consent to participate in the study. After answering and giving consent, the participants were automatically redirected to a specially designed page in the Social Lab software. The participants were then informed that they would be participating in testing the functionality of a prototype of the new social network. They were told that they would be given 7 minutes to freely explore its basic functionalities. The participants were also informed that other users were taking part in the testing, with whom they could interact. In addition, they were encouraged to visit the private profiles of other − alleged − users to identify the pros and cons of the IT solutions used in order to communicate them to the site's authors. The final piece of instruction each respondent received was as follows: "Since various people are involved in the project, if you notice any strange, aggressive behaviour or posts, use the REPORT button, which is under each message and photo. This will ensure that information about inappropriate behaviour reaches the administrator."

At some point while browsing through the social network simulation, participant noticed aggressive comments that a certain aggressor (who was actually a bot) posted on the profile (wall) of another user (also a bot). In total, each participant could see a maximum of eight such posts (Appendix 1).

In the first condition, when the participant read the comments, for some of the participants the attacked user's profile displayed a request for help, which had the following content: "I can't deal with this person, he keeps insulting me. I'm really asking you guys to help me, just click the Report button under his posts." Significantly, this request for help was also visible on the homepage, acting as an information stream (analogous to Facebook, for example).

In the second condition, participants also saw the request for help, but supplemented with an additional sentence at its end, which exemplified the use of the social influence technique, which in its original version is known as "every penny helps" (Cialdini & Schroeder, 1976; Fraser et al., 1988). For the purpose of ensuring adequate credibility and adapting it to the subject matter of this study, it was used in a modified version: "every reaction will help." We wanted to test whether the use of this influence technique would further increase the probability of reaction in the face of a crisis situation and, thus, reduce the degree of diffusion of responsibility.

An additional manipulation was to introduce to some participants the information that the aggressive comments were also noticed by other users ("viewed 42 times"), while the rest of the participants felt that they were the only one to notice this crisis situation ("viewed 1 time"). Each of the aggressive posts, depending on the condition, had the same annotation regarding the number of times it was displayed. In summary, the study procedure had a 2x2 intergroup pattern, based on which it is

possible to distinguish four conditions to which respondents were randomly assigned:

- Request for help and comments viewed 1 time
- Request for help and comments viewed 42 times
- Request for help with "every reaction will help" and comments viewed 1 time
- Request for help with "every reaction will help" and comments viewed 42 times

The manipulation of the number of displays was intended to induce a distraction of responsibility in some respondents. They could see that the aggressive comment was displayed by a significant number of other − alleged − users, thus the responsibility for providing help in an emergency was spread over 40 people ("42 views"). The dependent variable was the number of clicks on the "Report" button by each respondent. The maximum number of times he or she could do so was 8 (that's how many aggressive comments there were). Importantly, the respondent did not know how many times other users clicked the "Report" button, he only saw information about the number of times the comment itself was displayed (1 or 42).

RESULTS

The statistical software JASP 0.17.3 was used to run the analysis. To check whether the experimental condition influences the number of clicks on the button "Report", ANOVA with a 2x2 experimental design was carried out: 2 (request manipulation) x 2 (display manipulation). There was homogeneity of variances for experimental conditions (request for help with or without technique) for "1 view" and "42 views" manipulation, as assessed by Levene's test for equality of variances (p = .101). A Shapiro−Wilk test of normality was conducted to determine whether the number of reactions data (clicks on the "Report" button) is normally distributed. The results indicate that we must reject the null hypothesis ($p < 0.001$) and conclude that data are not normally distributed. However, because ANOVA tolerates data whose distribution is not normal, we decided to use this statistical method (skewed = -.272, kurtotic = -.999).

The main effect of the experimental condition, $F(1, 164) = 8.89$; $p = .003$; $\eta p^2 = .040$ ("request *without* technique": $M = 4.00$; $SE = .250$, "request *with* technique": $M = 5.06$; $SE = .248$), and the main effect of number of views were significant: $F(1, 164) = 35.17$; $p < .001$; $\eta p^2 = .158$ ("1 view": $M = 5.58$; $SE = .246$, "42 views": $M = 3.49$; $SE = .252$). The interaction effect was also significant: $F(1, 164) = 12.03$; $p < .001$; $\eta p^2 = .054$.

Post hoc analyses using the Tukey HSD test indicated that the average number of button clicks was significantly lower in the "Request *without* technique + 42 views" condition ($M = 3.57$; $SD = 2.59$) than in the "Request *with* technique + 1 view" condition ($M = 6.71$; $SD = 1.79$): $t(167) = 6.42$, $p_{tukey} < .001$, $d = 1.38$, 95 % CI [-1.98, -.77]. Another comparison shows that the average number of button clicks was significantly lower in the "Request *with* technique + 42 views" condition ($M = 3.40$; $SD = 2.33$) than in the "Request *with* technique + 1 view" condition ($M = 6.71$; $SD = 1.79$): $t(167) = 6.68$, $p_{tukey} < .001$, $d = 1.45$, 95 % CI [-2.07, -.83]. The last significant comparison was between "Request *without* technique + 1 views" condition ($M = 4.44$; $SD = 2.38$) and "Request *with* technique + 1 view" condition ($M = 6.71$; $SD = 1.79$): $t(167) = 4.61$, $p_{tukey} < .001$, $d = .99$, 95 % CI [-1.59, -.40].

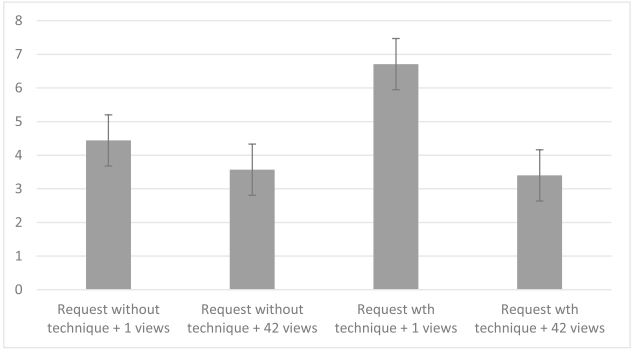


Figure 1. The average number of "Report" button click for every condition

DISCUSSION

The results of the experiment demonstrated two important points. First, the use of an appropriate social influence technique significantly impacts the greater propensity of the participants to respond in a crisis situation. Secondly, we confirmed that in the Internet space the dispersion of responsibility occurs in a similar way as in real life. Respondents who saw that aggressive comments against another user were displayed dozens of times (implicitly: by other Internet users) reacted less than those respondents who were presented with the information that the comments were displayed only once. Thus, the fundamental assumption of the theory of diffusion of responsibility, which holds that the greater the number of observers of a crisis event, the less likely it is that any of them will take personal responsibility and take a specific action (e.g. provide help or support to the victim), was confirmed.

It is no great surprise to find that the Internet is a very convenient space for a huge amount of antisocial behaviours. The outcomes concerning the diffusion of responsibility obtained by us here help to understand why it is so easy for the Internet trolls (individuals engaging in malicious online behaviour with the intent to trigger conflicts in conversations, such as online chats or forums) and haters (people aiming at publicly expressing negativity and their hating attitute towards other Internet users or objects) to thrive. Internet accessibility allowing almost everyone to reach it from the comfort of their own homes, anonymity granting almost total exemption from punishment and, finally, the diffusion of responsibility, which makes the attacks even more unpunished, all contribute to the growing development of trolls and haters activity in the Internet (Gylfason et al., 2021, Malecki et al., 2021).

Each person surveyed was able to press the "Report" button a maximum of 8 times, which is the number of how

many aggressive comments they noticed. It is noteworthy that each person surveyed saw all eight entries; there was not a single person who did not see them, since this is how the procedure was technically prepared.

The results also confirmed those obtained by Dolinski et al. (2005), showing that the original "every penny will help" technique can also be effective in a modified formulation (Dolinski & Grzyb, 2023). Unexpectedly, the effect of using this influence technique was significant only when the diffusion of responsibility mechanism was likely to be triggered, i.e. in the 1-display condition. When the respondent saw the information about displaying the comment 42 times, the use of the additional phrase "every reaction will help" was not significant. The number of clicks on the "Report" button was virtually the same, regardless of whether or not this social influence technique was used. This result may suggest that the diffusion of responsibility prevails upon the "every reaction will help" technique taking most of the responsibility off the participants in that condition.

The experiment conducted is not free of limitations. Among the most important of these is that the procedure used was a simulation intended to "pretend" to be a real social network. Although efforts were made to prevent this, the participants may have had a sense of some artificiality in terms of what they saw (such as aggressive comments). There are plans to continue the study using Social Lab software, but allowing an even more comprehensive design of the social media environment. Nevertheless, the results obtained allow - with some caution - to conclude that certain social influence techniques can be an effective tool for reducing the diffusion of responsibility.

ETHICS

The study was approved by the local ethics committee (opinion number: 01/P/06/2017). Informed consent was obtained before enrolment.

BIBLIOGRAPHY

Barron, G., & Yechiam, E. (2002). Private e-mail requests and the diffusion of responsibility. *Computers in Human Behavior*, *18*, 507–520. doi: 10.1016/S0747-5632(02)00007

Blair, C. A., Thompson, L. F., & Wuensch, K. L. (2005). Electronic helping behavior: The virtual presence of others makes a difference. *Basic and Applied Social Psychology*, *27,* 171–178. doi: 10.1207/s15324834basp2702_8

Cialdini, R. B., & Schroeder, D. A. (1976). Increasing compliance by legitimizing paltry contributions: When even a penny helps. *Journal of Personality and Social Psychology*, *34*(4), 599–604. doi: 10.1037/0022-3514.34.4.599

Cieciura, J. (2016). A Summary of the Bystander Effect: Historical Development and Relevance in the Digital Age. *Inquiries Journal*, *8*(11).

Cugelman, B., Thelwall, M., & Dawes, P. (2011). Online interventions for social marketing health behavior change campaigns: A meta-analysis of psychological architectures and adherence factors. *Journal of Medical Internet Research*, *13*(1), e17. doi: 10.2196/jmir.1367

Darley, J. M., & Latané, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology*, *8*, 377–383. doi: 10.1037/h0025589

Doliński, D. (2016). *Techniques of social influence. The psychology of gaining compliance*. Routledge

Doliński, D., Grzyb., T. (2023). *100 Effective techniques of social influence. When and why people comply*. Routledge.

Doliński, D., Grzyb, T., Olejnik, J., Prusakowski, S., & Urban, K. (2005). Let's dialogue about penny. Effectiveness of dialogue involvement and legitimizing paltry contribution techniques. *Journal of Applied Social Psychology*, *35*(6), 1150−1170. doi: 10.1111/j.1559-1816.2005.tb02164.x

Dovidio, J. (1984). Helping behavior and altruism: An empirical and conceptual overview. *Advances in Experimental Social Psychology*, *17,* 361−427. doi: 10.1016/S0065-2601(08)60123-9

Fischer, P., Krueger, J., Greitemeyer, T., Kastenmüller, A., Frey, D., et al. (2011). The bystander-effect: A meta-analytic review on bystander intervention in dangerous and non-dangerous emergencies. *Psychological Bulletin*, *137*(4), 517−537. doi: 10.1037/a0023304

Flynn, J., & Lake, V. (2008). If you need help, just ask: Underestimating compliance with direct requests for help. *Journal of Personality and Social Psychology*, *95*(1), 128−143. doi: 10.1037/0022-3514.95.1.128.

Fraser, C., Hite, R. E., & Sauer, P. L. (1988). Increasing contributions in solicitation campaigns: The use of large and small anchorpoints. *Journal of Consumer Research*, *15*(2), 284–287. doi: 10.1086/209166

Freeman, S., Walker, M., Bordon, R., & Latané, B. (1975). Diffusion of responsibility and restaurant tipping: Cheaper by the bunch. *Personality and Social Psychology Bulletin*, *1,* 584–587. doi: 10.1177/ 014616727500100407

Garaizar, P., & Reips, U-D. (2014). Build your own social network laboratory with Social Lab: A tool for research in social media. *Behavior Research Methods*, *46*, 430−438. doi: 10.3758/s13428-013-0385- 3

Gordillo, A., Barra, E., Garaizar, P., & Lopez-Pernas, S. (2021). Use of a simulated social network as an educational tool to enhance teacher digital competence. *IEEE Revisita Iberoamericana de Tecnologias del Aprendizaje*, *16*(1), 107−114. doi: 10.1109/RITA.2021.3052686

Grzyb, T., & Doliński, D. (2017). "This is my only request"– Using the 'Omega'strategy to boost the success of charity drives. *European Review of Applied Psychology*, *67*, 181−185. doi: 10.1016/j.erap.2017.02.003

Gylfason, H. F., Sveinsdottir, A. H., Vésteinsdóttir, V., & Sigurvinsdottir, R. (2021). Haters gonna hate, trolls gonna troll: The personality profile of a Facebook troll. *International Journal of Environmental Research and Public Health*, *18*(11), 5722−5734. doi.org/10.3390/ijerph18115722. doi: 10.3390/ijerph18115722

Harari, H., Harari, O., & White, R. V. (1985). The reaction to rape by American male bystanders. *The Journal of Social Psychology*, *125*, 653–658. doi: 10.1080/00224545.1985.9712039

Harris, V. A., & Robinson, C. E. (1973). Bystander intervention: Group size and victim status. *Bulletin of the Psychonomic Society*, *2*, 8–10.

Horowitz, I. A. (1971). The effect of group norms on bystander intervention. *The Journal of Social Psychology*, *83*, 265–273. doi: 10.1080/ 00224545.1971.9922471

Howard, W., & Crano, W. D. (1974). Effects of sex, conversation, location, and size of observer group on bystander intervention in a high risk situation. *Sociometry*, *37*, 491–507. doi: 10.2307/2786423

Kleinsasser, A., Jouriles, E. N., McDonald, R., & Rosenfield, D. (2015). An online bystander intervention program for the prevention of sexual violence. *Psychology of Violence*, *5*(3), 227–235. doi: 10.1037/a0037393

Knowles, E. S., & Linn, J. A. (2004). *Resistance and persuasion*. Mahwah, NJ: Erlbaum.

Kozlov, M. D., & Johansen, M. K. (2010). Real behavior in virtual environments: Psychology experiments in a simple virtual-reality paradigm using video games. *CyberPsychology, Behavior, & Social Networking*, *13,* 711–715. doi: 10.1089/cyber.2009.0310.

Latané, B., & Darley, J. M. (1968). Group inhibition of bystander intervention in emergencies. *Journal of Personality and Social Psychology*, *10,* 215–221. doi: 10.1037/h0026570

Latané, B., & Darley, J. M. (1970). *The unresponsive bystander: why doesn't he help?*. Appleton-Century-Crofts.

Latané, B., & Elman, D. (1970). The hand in the till. In B. Latané & J. M. Darley (Eds.), *The unresponsive bystander: Why doesn't he help?* Appleton-Century-Crofts.

Latané, B., & Nida, S. (1981). Ten years of research on group size and helping. *Psychological Bulletin*, *89*, 308–324. doi: 10.1037/0033-2909.89.2.308

Levy, P., Lundgren, D., Ansel, M., Fell, D., Fink, B., & McGrath, J. E. (1972). Bystander effect in a demand-without-threat situation. *Journal of Personality and Social Psychology*, *24*, 166–171. doi: 10.1037/h0033380

Malecki, W. P., Kowal, M., Dobrowolska, M., & Sorokowski, P. (2021). Defining online hating and online haters. *Frontiers in Psychology*, *12*, 744614. doi.org/10.3389/fpsyg.2021.744614

Markey, P. M. (2000). Bystander intervention in computer-mediated communication. *Computers in Human Behavior*, *16*, 183–188. doi: 10.1016/S0747-5632(99)00056-4

Martin, K., North, A. (2015). Diffusion of responsibility on social networking sites. Computers in Human Behavior, 44, 124-131. doi: 10.1016/j.chb.2014.11.049

Piliavin, I. M., Rodin, J., & Piliavin, J. A. (1969). Good Samaritanism: An underground phenomenon? *Journal of Personality and Social Psychology*, *13*(4), 289–299. doi: 10.1037/h0028433

Piliavin, J., Dovidio, J., Gaertner, S., & Clark, R. (1981). *Emergency intervention*. Academic Press.

Ross, A. S., & Braband, J. (1973). Effect of increased responsibility on bystander intervention: II. The cue value of a blind person. *Journal of Personality and Social Psychology*, *25*, 254–258. doi: 10.1037/h0033964

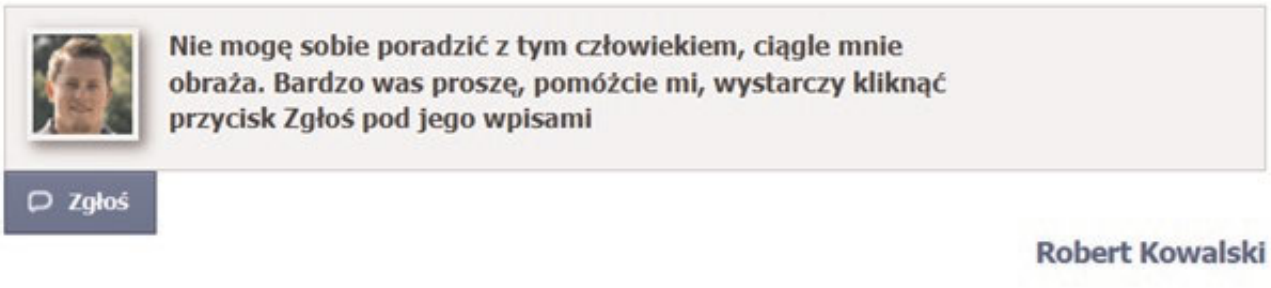
Valentine, M. E. (1980). The attenuating influence of gaze upon the bystander intervention effect. *Journal of Social Psychology, 111*(2), 197–203.

APPENDIX 1

Screenshots of Social Lab procedure. “1 view” condition:

Screenshots of Social Lab procedure. “42 views” condition:

Screenshots of Social Lab procedure. Request for help *without* technique:



Screenshots of Social Lab procedure. Request for help *with* technique: