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Exposure to online hate material and social trust among Finnish youth

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Abstract

Purpose – Trust is one of the key elements in social interaction; however, few studies have analyzed how the proliferation of new information and communication technologies influences trust. The authors examine how exposure to hate material in the internet correlates with Finnish youths' particularized and generalized trust toward people who have varying significance in different contexts of life. Hence, the purpose of this paper is to provide new information about current online culture and its potentially negative characteristics.

Design/methodology/approach – Using data collected in the spring of 2013 among Finnish Facebook users ($n = 723$) ages 15-18, the authors measure the participants' trust in their family, close friends, other acquaintances, work or school colleagues, neighbors, people in general, as well as people only met online.

Findings – Witnessing negative images and writings reduces both particularized and generalized trust. The negative effect is greater for particularized trust than generalized trust. Therefore, exposure to hate material seems to have a more negative effect on the relationships with acquaintances than in a more general context.

Research limitations/implications – The study relies on a sample of registered social media users from one country. In future research, cross-national comparisons are encouraged.

Originality/value – The findings show that trust plays a significant role in online setting. Witnessing hateful online material is common among young people. This is likely to have an impact on perceived social trust. Hateful communication may then impact significantly on current online culture, which has a growing importance for studying, working life, and many leisure activities.

Keywords Social networking (e.g. Facebook, Second Life), Web 2.0, Information society, Trust

Paper type Research paper

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1. Introduction

Trust is vital for social interaction. It is the foundation of romantic relationships, the cornerstone of communities, and the basis for a working society. Be it interactions between two individuals or the functioning of institutions, societies are built on trust (e.g. Offe, 1999; Welch *et al.*, 2005). Trust is a central tool for interaction, or as Freitag and Traunmüller (2009) put it, an enabler of cooperation, from which all involved parties seek wellbeing or to benefit in some way (see also Offe, 1999). It is therefore critical to understand the social forces that influence trust. One potential influence on trust is the widespread changes in how people communicate, interact, receive information, and entertain themselves (e.g. Castells and Himanen, 2002; van Dijk, 2012). This question is extremely important regarding today's young people, who have grown up using information and communication technologies (ICTs) (e.g. Livingstone, 2009; Wilska, 2003), with many of them having started using these technologies at a very young age (see Lenhart *et al.*, 2010; Vahlberg, 2010). Because ICTs serve as common tools for most people in western countries (Robinson, 2011; Räsänen, 2008), social interaction increasingly occurs in online environment.

Given the importance of trust in society, it is unsurprising that it has been widely studied, and trust as it relates to ICT use has been studied in relation to e-commerce (see e.g. Wang and Emurian, 2004), e-health, and e-government (see e.g. Beldad *et al.*, 2010). More recently, researchers have investigated how the reliability, credibility, and safety of the content users encounter online, rather than the characteristics of users themselves, influence trust (Boyd, 2002; Hargittai *et al.*, 2010). Research investigating issues of trust in relation to general ICT use has received some attention in the past (Bekmeier-Feuerhahn and Eichenlaub, 2010; Cheng *et al.*, 2013; Friedman and Khan, 2000; Henderson and Gilding, 2004; Kavanaugh *et al.*, 2005; Kobayashi *et al.*, 2006; Lankton and McKnight, 2011; Räsänen and Kouvo, 2007; Valenzuela *et al.*, 2009), however, little of this research has focussed on youth; albeit young people are likely the group most affected by ICT because they were raised with ICTs as integral parts of their daily lives. We aim to address these gaps in the literature by investigating the influence of a specific ICT experience on trust: namely, we investigate the relationship between exposure to hate material and levels of trust among youth.

In addition to a relative lack of literature investigating the influence of ICTs on trust among youth, very few studies investigate the influence online hate material has on youth. While researchers have investigated violence in online games and the potential threat of online predators (e.g. Jones *et al.*, 2012; Livingstone *et al.*, 2011; Whittle *et al.*, 2013; Ybarra *et al.*, 2011), few have investigated the influence of hateful messages and content that "advocate violence against, separation from, defamation of, deception about or hostility towards others" (Franklin, 2010, p. 2). Most previous studies of online hate material focus on the characteristics of groups that produce hate materials or their online sites (e.g. Duffy, 2003; Douglas, 2007; Gerstenfeld *et al.*, 2003; Levin, 2002). Only recently have larger scale surveys examined the wider social aspects associated with exposure to and experiences of online hate material (Jones *et al.*, 2012; Livingstone *et al.*, 2011; Ybarra *et al.*, 2011).

Our research is significant for a number of reasons. First, while an abundance of research is dedicated to trust, very little investigates the potential factors that influence or lead to trust. While trust is one of the most studied phenomena in the social sciences in recent decades, the factors that generate trust in society are still not fully understood (e.g. Delhey *et al.*, 2011; Kouvo, 2011; Welch *et al.*, 2005). Second, there is a limited amount of research on young people's exposure to online hate material, with

only Livingstone *et al.* (2011) and Ybarra *et al.* (2011) having data from a comprehensive topical surveys. Furthermore, there is also very little research focussing on trust, particularly among adolescents or young adults, beyond health-related topics (see Klosterman *et al.*, 2005; Lear, 1995). However, none of the preceding studies examines directly the association between exposure to online hate material and trust.

Our intention is to fill this gap by analyzing the correlates of trust in the context of the internet, and in particular how exposure to hate material correlates with Finnish youths' levels of trust. We therefore focus on two specific questions: first, is exposure to online hate material correlated with the levels of trust among young internet users and second, does this correlation vary depending on if we analyze particularized or generalized trust in different life contexts. In order to do this we investigate the relationship between exposure to online hate material and respondents' trust in particular social groups and also at a more general level. First, we will provide an overview of the literature in association with trust and its relationship with both new technology and online hate material. We will then take a look at the data and methodology, following with our research results and discussion of the implications of our findings.

2. Trust and new technology

A large body of literature reveals that trust is a multi-faceted concept. Feelings of trust are most common among those closest to us and with whom we tend to interact frequently, which typically include our family and friends. Yet, researchers commonly acknowledge two types of trust, particularized and generalized trust (Stolle, 2002; Uslaner, 2002). Particularized trust is typically extended to close acquaintances and those with whom we interact on a daily basis, such as family, friends, colleagues, and neighbors. Conversely, generalized trust extends beyond close social networks to people in general, such as those met on the street or strangers (Stolle, 2002; Uslaner, 2002). Similar to these concepts, Freitag and Traunmüller (2009) distinguish between intimate and abstract trust, Putnam (2000) differentiates between thin and thick trust, and Yamagishi and Yamagishi (1994) talk about knowledge-based trust and general trust. In essence, these scholars are distinguishing between two groups of trustees: those close to us and in our primary networks and people more generally.

Scholars generally find that particularized trust is a function of the perceived ability, benevolence, and integrity of the trustee (Mayer *et al.*, 1995; also see Lankton and McKnight, 2011). Similarly, Sztompka (1999) argues that "primary trustworthiness" is determined by factors such as the trustee's performance and reputation. In terms of ICTs, users would best be able to judge the integrity of those with whom they communicate frequently. Moreover, ICT users are more likely to consider someone's reputation favorably if they share values and interests. As Sztompka (1999) observed, individuals are most likely to extend trust in circumstances of "closeness, intimacy, familiarity" (p. 81). Indeed, numerous researchers verify that the rate of interaction and degree of similarity between individuals are positively related to levels of trust between them (Bekmeier-Feuerhahn and Eichenlaub, 2010; Delhey and Newton, 2003; Fukuyama, 1999; Macy and Skvoretz, 1998; Nee and Sanders, 2001; Welch *et al.*, 2005). Most researchers find that internet users' virtual communications are primarily with people they know (Uslaner, 2004), and ICTs are simply additional means by which people who already are connected can communicate (e.g. Dutta-Bergman, 2004). Thus, we expect that ICTs are unlikely to alter the determinants of particularized trust significantly.

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While ICTs may not influence particularized trust, we speculate they could potentially have a dramatic effect on the determinants of generalized trust. If ICTs have an influence, it largely depends on whether generalized trust is a personality trait or a function of interactions and experiences. Uslaner (2002), for example, argues that generalized trust is likely a trait such as levels of happiness or optimism, and researchers generally find a positive relationship between happiness and generalized trust (e.g. Dunn and Schweitzer, 2005; Freitag and Traunmüller, 2009; Lount, 2010). If this is the case, ICT use is unlikely to influence levels of generalized trust. That is, those who have the trait that leads them to trust others will likely do so regardless of their use of ICTs.

Conversely, others claim that informal ties and interactions increase the perception that others are trustworthy. For example, several researchers find that trust of family members, neighbors, and coworkers is related to higher levels of generalized trust (e.g. Freitag and Traunmüller, 2009; Glanville and Paxton, 2007; Glanville *et al.*, 2013). Freitag and Traunmüller (2009) argue that not only does trust in those known to us significantly increases our trust in strangers, our interactions with strangers also influences our generalized trust. They argue that the mechanism by which particularized trust spills over to generalized trust is through specific interactions with strangers and that particularized trust will not spillover to generalized trust without positive experiences with strangers. As they conclude, "positive experiences with unknown people are indispensable for building generalized trust" (Freitag and Traunmüller, 2009, p. 798).

In addition to having positive experiences with strangers, familiarity with ICTs may increase trust. The unpredictable and potentially anonymous nature of the internet creates environmental uncertainties and risks (Pavlou, 2003), and experienced ICT users know this. For example, in-depth interviews with chatroom users reveal users believe the online environment promotes unrealistic self-presentations, a lack of accountability, and opportunities for deceit and betrayal (Henderson and Gilding, 2004). However, the more time one spends online and the more familiar they become with that environment, the less likely they will consider the online environment unpredictable and risky (Metzger, 2006). Indeed, Corbitt *et al.* (2003) find that customers' level of internet experience is positively related to trusting e-commerce web sites. Similarly, several researchers find that the intensity of ICT use and frequent online communications is positively related to trust (Bekmeier-Feuerhahn and Eichenlaub, 2010; Kavanaugh *et al.*, 2005; Kobayashi *et al.*, 2006; Räsänen and Kouvo, 2007; Valenzuela *et al.*, 2009). Thus, we speculate that if generalized trust is dependent on the social environment and not solely a function of personality traits, time spent online should increase trust.

3. Trust and exposure to hate material among young people

It is likely that exposure to online hate material can influence one's level of trust. In support of this, we make the following assumptions based on preceding literature on social trust. First, exposure to online hate material has detrimental effects on those who experience it, especially among for the members of the groups being attacked (see Leets, 2001; Leets and Giles, 1997; Lee and Leets, 2002; Subrahmanyam and Šmahel, 2011). For example, those exposed can suffer short-term emotional effects such as mood swings, heightened anger, loneliness, and fear (Tynes *et al.*, 2004; Tynes, 2006), and these effects can last for months and potentially years (Leets, 2001). Since a person's happiness increases his or her levels of particularized and generalized trust,

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it is possible that the negative feelings that exposure to online hate material afflicts will decrease trust in others.

Next, as Freitag and Traunmüller (2009) found, particularized trust only spills over to generalized trust when the individual has positive experiences with strangers. Assuming this is true, seeing online hate material would likely reduce generalized trust. Evidence suggests that most reactions to acts of violence and expressions of hate viewed online are overwhelming negative (see e.g. Lindgren, 2011). In addition, exposure to violent media reduces levels of generalized trust (Salmi *et al.*, 2007). Thus, if generalized trust is a function of the social environment and not solely due to a personality trait, we predict that exposure to online hate materials would decrease levels of generalized trust. This notion is particularly important when studying teenagers and young adults, who are commonly the most frequent users of the social media services (Statistics Finland, 2014; Payton and Galloway, 2014; Lenhart *et al.*, 2010), with such activity having been found to result in higher risk of being exposed to harmful online materials (Näsi *et al.*, 2014).

4. Data and methods

We aim to understand how exposure to online hate materials influences youths' levels of particularized and generalized trust. In the empirical analysis, we are particularly interested in the relationship between ICT use and trust among young people because they are the most active users of new gadgets (e.g. Livingstone, 2009; Näsi, 2013; Räsänen, 2008). We investigate the relationship between exposure to online hate material and respondents' trust in their family, close friends, other acquaintances, work or school colleagues, neighbors, people in general, and people they met only online. Our data were collected in the spring of 2013 from a sample of 15-18-year-old Finnish Facebook users.

Data

Respondents were recruited in the spring 2013 for an online survey targeting Finnish Facebook users between the ages of 15 and 30. However, our particular focus was among the youngest users, thus, in this paper, we focus on Finnish youth and their responses. We chose to include respondents aged 15-18 year olds ($n = 723$). There is a very limited amount of research focussing particularly on adolescents' and their perceived trust, thus our focus is to provide new research from such perspective as well.

We launched an online survey using three Facebook advertisement campaigns in April-May 2013. The three campaigns were potentially visible to between 432,649 and 528,261 adolescents and young adults who had Facebook accounts, which comprises approximately half of the Finnish population aged 15-30 (see Statistics Finland, 2013). In practice, however, the link to the survey site was clicked 6,074 times, resulting in 1,337 survey responses. Respondents who terminated the questionnaire during the first two pages of the eight-page survey, however, were not included in the sample (19.6 percent). Therefore, only those respondents who completed the survey sections that included demographic characteristics, questions about their online activity and online risks, and questions about their exposure to online hate speech were included in the final sample.

Dependent measures

We measured respondents' trust of several groups. Respondents were asked the general question: would you say that the following people can be trusted, or that you cannot be

too careful in dealing with these people? Responses for each group ranged from 1 to 10, where 1 was "you cannot be too careful" and 10 was that the group "can be fully trusted."

The groups used to measure generalized trust were:

(1) "people in general"; and

(2) "people met only online."

The groups used to measure particularized trust were:

(1) "school or work colleagues"; and

(2) "other acquaintances."

Measuring generalized and particularized trust by using these items permits us a comparison of trust in four different social groups, both in offline and online context. Since literature generally indicates that contextual factors significantly influence expressed levels of trust, it is important to distinguish between trust of those met offline and trust of those met online. In addition, it has been noted that there is a problem with the commonly used measure of trust in other people. Specifically, the inability of researchers to know how wide a circle of "others" respondents considered to be "most people" is a significant weakness of the commonly employed generalized trust measures (Delhey *et al.*, 2011). Therefore, by using several items in our comparisons, we can better examine different dimensions of interpersonal trust.

Independent measures

Our central independent variables are whether respondents observed hate material online and if the respondent was a victim of online harassment. To measure exposure to online hate materials, respondents were asked, "In the past 3 months, have you seen hateful or degrading writings or speech online, which inappropriately attacks certain groups of people or individuals?" The responses to this item were yes and no. To measure online victimization, respondents were asked, "In your own opinion, have you been a target of harassment online, for example where people have spread private or groundless information about you or shared pictures of you without your permission?" Again, the responses to this item were yes and no.

We also control for a number of factors known to be related to trust, including respondents' gender (male and female), residential area, age, and perceived level of happiness. It would be interesting to control for other factors, such as race or ethnicity as well, however the Finnish population is very homogenous (circa 5 percent immigration), and thus such variables would add relatively little to our research findings. Education was also excluded since the vast majority of Finns aged between 15 and 18 years are attending secondary education, thus it would have been a very homogenous variable. In terms of residence, in the questionnaire we had five categories for residence, a Helsinki capital region, a large city over 100,000 inhabitants, a medium-size city 50,000-100,000 inhabitants, a small city or town, open country or a rural area. For the purpose of analysis residence was then dichotomized into large- or medium-size city (population over 50,000 inhabitants) and small town or rural area (population less than 50,000 inhabitants). Age was measured as years of age, which provides us a continuous variable. Finally, to measure happiness, respondents were asked, "All things considered, how happy would you say you are?" The responses ranged from 1 (extremely unhappy) to 10 (extremely happy). This measure is treated as a continuous variable. Descriptive statistics for all independent variables are given in the Appendix.

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Analytic techniques

We begin by analyzing the mean score of respondents' levels of trust toward different groups (family, close friends, other acquaintances, work/school colleagues, neighbors, people met on the street, people in general, as well as people only met online) to see if it varies with exposure to online hate material while controlling for relevant variables. In the tables, mean values (Mean) are accompanied with standard errors (SE), which offer as descriptive estimates of how far the sample means are likely to be from the population mean. We will also report F-values, which are used to test the null hypothesis that indicates whether there are differences between respondents who had seen hate material and respondents who had not seen such material. The p-value then indicates whether differences of those who have witnessed hate material and those who have not are statistically significant. In the explanatory analysis, we conduct a univariate analysis of variance (ANOVA) to compare average means of trust within two pairs of social groups. The first pair includes people in general and people met only online. The second pair includes other acquaintances and school or work colleagues.

The selection of these four items for further analysis can be justified on the basis of their informal significance to young people's life. In other words, while family and close friends probably provide a stable anchoring point of interpersonal trust for respondents, the average ratings do not associate with exposure to hate material. Simultaneously, neighbors and people met on street tend to associate strongly with one's residential area, and are therefore not as well-applicable measures as people met online or other acquaintances. We restrict our analysis to main-effect tests, since our purpose is to evaluate the variations in the structure of trust toward these four groups of people. Therefore, our analysis aims at comparing the extent to which the selected independent variables explain the variances in the levels of trust.

Although we aim to understand the underlying processes of changing levels of trust, we are constrained by the limits of cross-sectional data. We therefore restrict our interpretations of the results to associations between variables measured at one point in time. Therefore, our analysis focusses on merely examining the variations in Finnish youth's levels of trust toward different groups of people and in relation to whether or not they were exposed to online hate material.

5. Results

Figure 1 reports respondents' levels of trust in different groups depending on if they were exposed to online hate material. Respondents who were exposed to such material report significantly lower levels of trust in all groups. Respondents trusted their family and good friends most. Among those who were exposed to online hate material, the mean levels of trust in family members was 7.80 and the mean level of trust in good friends was 8.08. For those who were not exposed to online hate material, the mean levels of trust in family members and good friends were 8.15 (F 3, 128; $p = 0.077$) and 8.20 (F 0, 491; $p = 0.484$), respectively. For work/school colleagues the mean level of trust was 5.16 for those who were exposed to online hate material and 5.66 (F 7, 099; $p = 0.008$) for those who were not exposed. For other acquaintances (mean scores of 4.85 for those exposed to hate materials and 5.59 (F 14, 614; $p = 0.000$) for those not exposed) and people in general (mean score 4.31 for those exposed and 4.84 (F 7, 361; $p = 0.007$) for those not exposed, respectively), the pattern in levels of trust are similar to the other social groups.

The only exceptions to the general pattern of lower levels of expressed trust among those exposed to online hate material compared to those not exposed to this materials is

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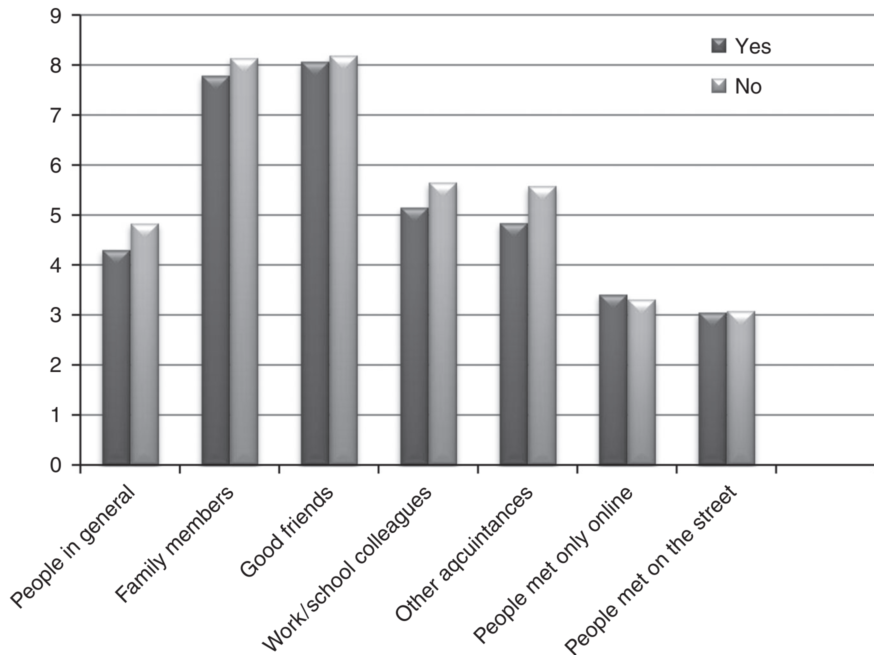

Figure 1.
Mean score of respondents' levels of trust toward different groups of people in terms whether they have witnessed online hate material or not

in levels of trust of people met only online and those met on the street. For people met online, the mean score was 3.42 for those who have been exposed to online hate material and 3.32 (F 0, 266; $p = 0.606$) for those who have not been exposed. For those met on the street, the mean level of trust was 3.06 for those exposed to online hate material and 3.09 (F 0, 028; $p = 0.868$) for those who had not been exposed.

Out of the six items, our explanatory analysis focusses on two items of generalized trust (people in general, people met online), and two items of particularized trust (acquaintances, colleagues). As discussed earlier, these two measures provide us with the most reliable measures for two dimensions of interpersonal trust. The frequencies of each of these four items were relatively normally distributed. Following this, we were able to proceed to explanatory analysis using generalized linear models.

We present the ANOVA results for our generalized trust measures in Table I. We examine levels of trust between people in general and people met only online separately. In terms of trust toward people in general, those who had witnessed hate material online and those reporting lower levels of happiness express significantly lower levels of trust than those who were exposed to hate materials and those with higher levels of happiness. In terms of trust toward people met only online, females are significantly less trusting than males, and happiness is inversely related to trusting those met online.

In addition to these statistically significant effects, the level of trust differs with respect to residence with large-city residents reporting lower levels of trust than small-city residents. This difference approaches statistical significance, but it is not significant at conventional levels. As noted, levels of trust of people met only online are relatively low overall; hence, the difference between those exposed to hate materials and those not exposed is not particularly large. The model regarding people in general

	People in general Mean	SE	p-Value	People met only online Mean	SE	p-Value
Seen hate material online						
Yes	4.33	0.12	0.038	3.51	0.13	0.281
No	4.72	0.16		3.29	0.18	
Gender						
Male	4.41	0.16	0.224	3.61	0.18	0.050
Female	4.64	0.11		3.19	0.13	
Residence						
Large- or medium-size city	4.58	0.15	0.537	3.21	0.17	0.057
Small town or rural area	4.47	0.12		3.59	0.14	
Being targeted online						
Yes	4.41	0.15	0.182	3.31	0.17	0.380
No	4.65	0.12		3.49	0.13	
Age	0.16	0.09	0.083	0,15	0.10	0.153
Happiness	0.38	0.04	0.000	0.10	0.05	0.035
	$R^2 = 0.149$ (adjusted = 0.140)			$R^2 = 0.027$ (adjusted = 0.017)		

Note: Main-effects ANOVA tests

Table I. Trust toward people in general and people met only online

accounts for 14 percent of the variance in generalized trust. However, the second model regarding trust of those met online only accounts for 2 percent of the variance.

In table II, we examine the results predicting the particularized trust items. Similar to above, we report the results for acquaintances and work/school colleagues separately. With respect to trusting other acquaintances, respondents who had witnessed hate material online, those who had been a target of online harassment, and those less happy reported significantly lower levels of trust than their counterparts did. In terms of work/school colleagues, females, those who had been targets of online harassment, younger respondents, and those less happy reported significantly lower levels of trust than did males, those who had not witnessed hate material online, those not targeted by online harassment, older respondents, and those reporting higher level of happiness. Both of the models explain almost a similar amount of the variance in particularized trust, 17 and 18 percent, respectively.

6. Discussion

Our primary goal was to examine how exposure to online hate material affects young Finns' trust in other people. Our particular focus was to examine the influence of exposure to online hate materials on particularized and generalized trust. Although youth's exposure to hateful online material has been previously documented (Livingstone *et al.*, 2011; Ybarra *et al.*, 2011), the broader social consequences of such exposure has not been studied.

In terms of overall practical implications, our results indicate that online hatred can have social impacts and influence young people's trust toward other people. The results resemble those of Salmi *et al.* (2007), who found that adolescent who watched more reality crime programs and read crime magazines and news about violence reported lower levels of generalized trust than those who had not been exposed to such material. Therefore, in terms of the implications, we can argue that

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Table II.
Trust toward other acquaintances and colleagues at work or school

	Other aqcuintances Mean	SE	p-Value	Work or school colleagues Mean	SE	p-Value
Seen hate material online						
Yes	4.93	0.12	0.004	5.24	0.11	0.088
No	5.47	0.16		5.55	0.15	
Gender						
Male	5.37	0.16	0.086	5.58	0.16	0.041
Female	5.04	0.11		5.21	0.11	
Residence						
Large- or medium-size city	5.19	0.15	0.929	5.33	0.14	0.415
Small town or rural area	5.21	0.12		5.46	0.12	
Being targeted online						
Yes	4.94	0.15	0.004	5.10	0.15	0.001
No	5.46	0.12		5.69	0.11	
Age	0.11	0.09	0.223	0.21	0.09	0.016
Happiness	0.37	0.04	0.000	0.37	0.04	0.000
	$R^2 = 0.173$ (adjusted = 0.165)			$R^2 = 0.187$ (adjusted = 0.178)		

Note: Main-effects ANOVA tests

the given medium, be it online, television or print, influences youths' trust on other people. In particular, exposure to online hate material clearly influences levels of both particularized and generalized trust. It is noticeable that young Finns have relatively low levels of trust, especially in terms of people they met only online.

It also appears that witnessing hate material online has a greater effect on the levels of particularized trust than generalized trust. That is, exposure to online hate material is more detrimental to the relationships with people who we are typically more acquainted with. While this finding may be due to the initially low levels of generalized trust, it is interesting nevertheless. Following Freitag and Traunmüller (2009), we hypothesized that exposure to online hate materials would impede the development of generalized trust because it would represent a negative experience with strangers. Yet, our results indicate that while exposure to online hate materials does reduce generalized trust, its influence is greatest on particularized trust.

Although the online world opens countless possibilities for young people to expand their experiences and social networks, it also involves risks and threats, and these possibilities and risks overlap (Livingstone and Helsper, 2010). The overlapping of potential risk may be especially apparent regarding trust on other people. Our study indicates that exposure to online hate material is not only relatively common, but it also has consequences for the young people who witness such material in their daily lives. In terms of past studies regarding youths' exposure to online hate material (see e.g. Livingstone *et al.*, 2011; Ybarra *et al.*, 2011), our study also sheds some light on what sort of implications such exposure actually has. Although it is always difficult to provide exact information regarding the cause and effect of a relationship, our findings show that exposure to online hate material mirrors negative associations with trust when compared to those young people who had not witnessed such material.

Our research has its limitations. First, our online sample, like most online samples, is not nationally representative. Our data were collected from Facebook using marketed links to the survey; therefore, we cannot be sure what motivated the respondent

to participate in the study. Although comparing our sample with official data from Statistics Finland (2013) suggests our sample is satisfactory, we cannot claim it is representative. We also note that the question concerning online hate material was not specific. We simply asked if respondents saw inappropriate, hateful of degrading material online. Furthermore, the nature of hate material probably varies also depending on the media and application (e.g. between SMS on mobile phones, regular SNS communication, or news material discussions). Therefore, we are unsure what type of material the respondents actually saw and in what context. Finally, our analysis is limited to Finnish youth, and we encourage future scholars to conduct cross-national research.

In terms of suggestions for future research, as earlier researchers have found, levels of trust and levels of happiness appear to be positively related. It is therefore likely that exposure to online hate material would have a similar correlation with the levels of happiness. If this is indeed the case, we suggest that the implications of exposure to online hate materials should receive more detailed examinations in future research. In addition, future research should examine how online hate material influences different age groups in terms of their perceived trust. Similarly, researchers should compare levels of trust across different age groups to see if older individuals are more trusting toward online acquaintances than younger individuals are.

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Appendix

Variable	
Seen hate material online	
Yes	67.4 (487)
No	32.6 (236)
Gender	
Male	34.9 (252)
Female	65.1 (471)
Residence	
Large- or medium-size city	40.9 (296)
Small town or rural area	59.1 (427)
Being targeted online	
Yes	35.2 (150)
No	64.8 (276)
Age	16.38 (0.977)
Happiness	6.81 (2.161)

Notes: Percentages (number of valid cases in parenthesis) represented for categorical variables; means (standard deviations in parentheses) represented for numerical variables

Table A1. Descriptive statistics for independent variables by sample

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