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Purpose. This study explores associations between worry about victimization, crime information processing, and social categorization biases. Its results speak to the public communication of the crime-risk.

Methods. The study tests hypotheses that draw on the construal-level theory of psychological distance and the uncertainty-identity theory. Through an online experiment that was conducted in 2015 on Amazon Mechanical Turk (N = 312), three experimental groups were exposed to different modes of crime information processing and were then asked about their worry about victimization and attitudes to social categorization.

Results. The results suggest that passive engagement with information about real crimes, that is only reading about them, is more likely to decrease levels of worry about victimization compared to engaging with such information actively, that is by thinking about causes or consequences of crime. It is also found that worry about victimization is significantly related to social categorization biases, namely in-group identification, outgroup derogation, and racist attitudes.

Conclusions. The mode of crime information processing (active vs. passive) appears to be a strong 'predictor' of worry about victimization. In turn, worry about victimization is related to social categorization biases that damage collective well-being. These findings can feed into evidence-based strategies for the public communication of crime that keep people informed but free from fear.

The objective of this study is twofold: first, to explore the impact of different modes of crime information processing on worry about victimization (Gabriel & Greve, 2003; Jackson, 2004); and second, to explore the impact of crime information processing and worry about victimization on social categorization biases (Flecker et al., 2006; Zick, Kupper, & Hovermann, 2011). The criminological relevance of this work relates to providing empirical evidence on the ways in which crime information can be communicated without damaging individual and collective well-being.

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To meet these objectives, the study draws theoretically on the construal-level theory of psychological distance (Liberman & Trope, 2008; Trope & Liberman, 2010) and the uncertainty-identity theory (Hogg, 2000, 2009). Empirically, it builds on recent criminological findings (Gouseti, 2018), which suggest that thinking about hypothetical crimes abstractly is more likely to be related to lower levels of worry about victimization as opposed to thinking about hypothetical crimes concretely.

Here, these findings are expanded in three ways. First, I look at the impact of different modes of crime information processing (namely, passive vs. active) on worry about victimization; second, the crime information pertains to real rather than hypothetical crimes; and third, I explore the impact of crime information processing and worry about victimization on social categorization biases (Gaertner, Dovidio, & Houlette, 2010; Hogg, 2000; Suh & Sung, 2011).

The research findings suggest that participants who processed information about real crimes passively (by only reading about them) were more likely to report lower levels of worry about falling victim of crime compared to those who actively processed the same information (by reflecting on either potential causes or consequences). The results also suggest that worry about victimization (but not crime information processing) was related to social categorization biases, namely in-group identification, outgroup derogation, and racist attitudes.

In what follows, I first discuss the theoretical framework of this study; second, the research methodology is presented, followed by the research results. Finally, the study's implications are discussed.

Construal-level theory of psychological distance, worry about victimization, and social categorization

The construal-level theory of psychological distance (hereinafter CLT) provides a useful theoretical framework of the impact of crime information processing on worry about victimization (Gouseti, 2018). CLT explores how individuals are capable of experiencing and expressing reactions to events that are not present in their immediate context (Trope & Liberman, 2010). CLT argues that it is the 'transcending' of the 'here and now' that enables reactions to distal events via psychological distance and mental construal (Liberman & Trope, 2008; Trope, Liberman, & Wakslak, 2007).

Psychological distance comprises four dimensions, namely when, where, to whom, and whether a distal event is perceived to occur. The further away in time, space, social distance, and reality, an event is perceived to be, the higher its psychological distance from one's 'here and now' (ibid.). Mental construal refers to what the distal event is perceived to be. The more detailed and context-bound the mental representation of the distal event, the lower the level of its construal; the more generic and abstract the mental representation of the distal event, the higher its construal level. According to CLT, psychological distance and mental construal are distinct, but interrelated; psychological distance is related to high-level construal and vice versa; psychological proximity is related to low-level construal and vice versa (Amit, Algom, & Trope, 2009; Liberman, Trope, & Stephan, 2007).

An important feature of CLT is its focus on the representational (vs. actual) proximity to distal events (Trope & Liberman, 2010). This is especially relevant to the study of the fear of crime, which has shown that subjective perceptions of crime and the crime-risk are important explanatory parameters of the phenomenon, often more so than their 'objective' counterparts (Box, Hale, & Andrews, 1988; Brunton-Smith, Jackson, & Sutherland, 2014; Brunton-Smith&Sturgis, 2011; Chadee &Ng Ying, 2013; Hale, 1996). It is thus suggested that the more psychologically proximal (vs. distant) crime is experienced to be, the higher the level of reported fear of crime, and the more detailed and vivid (vs. schematic and abstract) the mental representation of crime, the higher the level of reported fear of crime. Initial evidence of the applicability of CLT in fear of crime is provided by an experimental study (Gouseti, 2018), examining associations between crime construal, psychological distance from crime, and worry about victimization. The findings showed that a concrete, consequences-focused thinking about hypothetical crimes was related to psychological proximity to crime, and both low-level construal and psychological proximity to higher levels of worry about victimization. On the contrary, an abstract, causes-focused thinking about crime was related to psychological distance from crime (Rim, Hansen, & Trope, 2013), and both to lower levels of worry about victimization.

The current research expands these results by looking at crime information about real crime events. Previous criminological research has shown that the association between crime information and fear of crime depends on the nature of the information. Testing Gerbner and Gross's cultivation theory, Jamieson and Romer (2014) found, for instance, that violence portrayal on popular US TV shows from 1972 to 2010 was a significant predictor of fear of crime.On the contrary, Rice and Anderson (1990) find a weak, positive association between television viewing and fear of crime, alienation, and distrust (as cited in Dowler, 2003). When it comes to real crime events, criminological research has shown significant associations between crime news and fear of crime, especially in relation to local (as opposed to national) crime news (see Chiricos, Padgett, & Gertz, 2000; Liska and Baccaglini, 1990; Sheley and Ashkins, 1981).

This study also looks at potential effects of crime information processing and worry about victimization on social categorization biases (Gaertner et al., 2010; Hogg, 2000; Suh &Sung, 2009). This is a first attempt to explore the concept of social categorization bias in fear of crime research; it aims to provide empirical evidence of the argument that fear of crime damages not only individual well-being (Denkers & Winkel, 1998; Green, Gilbertson, & Grimsley, 2002; Jackson & Stafford, 2009), but also collective well-being (Hale, 1996; Morenoff, Sampson, & Raudenbush, 2001; Sampson & Raudenbush, 2004).

Drawing on the uncertainty-identity theory (UIT, Hogg, 2000, 2009), I explore the impact of crime information processing and worry about victimization on in-group identification, outgroup derogation and racist attitudes (Flecker et al., 2006; Zick et al., 2011) as proxies for social categorization biases. UIT suggests that sorting individuals into social categories constitutes social categorization, which helps give structure to lay knowledge of the world. In the process of simplifying the complex social world, however, classifying people into

categories might also contribute to stereotyping, which damages social interaction, and thus collective well-being (Bodenhausen, Kang,& Peery, 2012; Suh & Sung, 2009).

Also, UIT (Hogg, 2009) is relevant to the current research in that it conceptualizes affective reactions to uncertainty and risk not so much as grounded in personality, but as a context-bound phenomenon (Hogg, 2000). It suggests that uncertainty-related affect is 'aversive' and motivates attempts at resolution. One such motivated resolution pertains to processes of social categorization, such as in-group identification and outgroup derogation (ibid.). According to UIT, negative affectivity might trigger depersonalization of others and depersonalization of self. The former helps predict how others will behave and interact and the latter engenders a sense of belonging (Hogg, 2000, 2009), both contributing to a tendency to identify with 'similar others' and disfavour 'dissimilar others'.

The study

Conceptualization of key variables and research hypotheses

The key variables in the current research are fear of crime, crime construal, psychological distance, and social categorization. First, fear of crime is conceptualized and measured through its affective component, namely worry about victimization (Jackson, 2004; Jackson & Gray, 2010; see also Berenbaum, 2010; Kruglanski & Webster, 1996). Criminological research has shown that the fear of crime is multifaceted, comprising affective, behavioural, and cognitive components (for excellent reviews of this literature see inter alia Hale, 1996; Vanderveen, 2006). However, here the focus is only on the affective component. This is because the current study is exploratory, with most of the associations that are explored being novel; it was thus decided to develop models as parsimonious conceptually as possible. The focus on the affective component relates to the fact that it has been the most studied one (Hale, 1996; Shippee, 2013). Future research can expand the current scope by testing similar hypotheses, using the behavioural and cognitive components.

The conceptualization of crime construal draws on CLT literature, which shows that focusing on the consequences of distal events constitutes low-level construal, whereas focusing on their causes constitutes high-level construal (Rim et al. , 2013). This is because consequences depend on causes, but causes do not depend on consequences, rendering the latter secondary features of distal events, and the former primary features of such events (ibid.).

Psychological distance was conceptualized and measured through the notion of perceived likelihood of victimization, drawing on criminological research and the CLT. From a criminological perspective, the perceived likelihood of victimization is considered to be a cognitive judgement that informs emotional reactions to crime, such as worry about victimization (Jackson, 2011; Warr, 1987). From a CLT perspective (Todorov, Goren, & Trope, 2007; Wakslak & Trope, 2009), likelihood judgements instantiate psychological distance. Outcomes that are perceived as likely are experienced as psychologically proximal, whereas outcomes that are perceived as unlikely are experienced as psychologically distant.

Finally, the conceptualization of social categorization involves processes of organizing and giving structure to lay knowledge of the world (Brewer, 1999; Correia et al., 2012). This is a

fundamental human condition that helps simplify the complex social world by classifying people into categories, based, for instance, on their socio-demographic characteristics, such as race, gender, political orientation. Drawing on psychological literature (Bodenhausen, 2012; Hewstone, Rubin, & Willis, 2002; Hogg, 2000, 2009), social categorization biases were operationalized as in-group identification, outgroup derogation, and racist attitudes. Turning to the research hypotheses, it is first assumed that passive crime information processing, that is reading about crime events without further engagement with the information, will be related to lower levels of worry about victimization compared to active crime information, that is reading about crime events and further engaging with the information by speculating about their causes or consequences (hypothesis 1).

Second, drawing on recent criminological findings (Gouseti, 2018), it is assumed that active crime information processing that focuses on the crimes' consequences (concrete crime construal) will be related to higher levels of worry about victimization compared to active crime information processing that focuses instead on the causes (abstract crime construal) of crime (hypothesis 2).

Third, turning to psychological distance, it is hypothesized that perceived likelihood of victimization will be related to worry about victimization, both directly (hypothesis 3a) and indirectly through the mode of crime information processing (hypothesis 3b). The indirect effect suggests that the impact of perceived likelihood of victimization on worry about crime might be different for those who were primed to construe crime concretely and those who were primed to construe them abstractly.

Finally, drawing on UIT (Hogg, 2000, 2009), crime information processing and worry about victimization are assumed to be related to processes of social categorization biases (Gaertner et al., 2010). In particular, it is explored whether the mode (passive vs. active) of crime information processing (hypothesis 4) and worry about victimization (hypothesis 5) are related to in-group identification (hypotheses 4a and 5a), outgroup derogation (hypotheses 4b and 5b), and racist attitudes (hypotheses 4c and 5c).

Method

Participants, design, and procedure

The sample comprises 312 US participants (140 women and 172 men), recruited in December 2015 on the web-based platform Amazon Mechanical Turk (MTurk), (Berinsky, Huber,&Lenz, 2012; Buhrmester, Kwang, & Gosling, 2011). MTurk was launched in 2015 and has been increasingly popular in the social sciences to crowdsource social research; this is partly because it has democratized the research process by allowing rapid recruitment of diverse samples at a low cost compared to professional online panels (Berinsky et al., 2012; Paolacci & Chandler, 2014).

Due to the online nature of the platform, MTurk samples' representativeness and the validity of the MTurk results have been extensively investigated in meta-analytical research (Clifford, Jewell, & Waggoner, 2015; Huff & Tingley, 2015; Mason & Suri, 2012; Peer, Vosgerau, &Acquisti, 2014). One of the key findings is that MTurk samples are more diverse than student

samples that are typically used in experimental research. Nevertheless, as this is non-probability sampling, no claim about representativeness of research populations can be made.

The current study drew from US 'MTurkers' to recruit participants.1 The choice of the location was based on the overrepresentation of Americans among MTurk workers (Berinsky et al., 2012), which eliminates to some degree the unrepresentativeness of MTurk samples. Interestingly, the exploration of the socio-demographic characteristics of the current sample echoes previous research into the comparison of US MTurk workers with the American general population (Berinsky et al., 2012; Clifford et al., 2015; Huff & Tingley, 2015; Paolacci, Chandler, & Stern, 2010; Paolacci & Chandler, 2014); this has shown that 'MTurkers' are more likely to be young, well-educated, unmarried and Asian compared to the American population. The sample's age ranged from 18 to 73 years (M = 34.7, SD = 10.4).

Participants were randomly assigned to one of three conditions, which were differentiated by the mode of the crime information that they were presented with (see Table 1) in a between-subjects design. After providing participants with general. information about the research, they were asked to give their informed consent and

complete an instructional manipulation check that screens out people who do random clicking (Oppenheimer, Meyvis, & Davidenko, 2009). The first set of items comprised questions about socio-demographics, and about past crime worries and general anxieties that are not discussed in the current analysis.

Participants were then presented with information about three real crime events (see Table 1)[1] The crime stories were the same within each of the three experimental

Table I. Experimental design

	Active information processing—consequences of real crimes condition (n = 104)		
Crime events	September 11 attacks (n = 104)	Ferguson shooting (n = 104)	Blackburn murder (n = 104)
	Active information processing—causes of real crimes condition (n = 104)		
Crime events	September 11 attacks (n = 104)	Ferguson shooting (n = 104)	Blackburn murder (n = 104)
	Passive information processing—reading about real crimes without further engagement condition (n = 104)		
Crime events	September 11 attacks (n = 104)	Ferguson shooting (n = 104)	Blackburn murder (n = 104)

conditions and were presented in random order. Participants were asked to read carefully the information about the three crimes. Depending on the experimental condition that they were randomly assigned to, they were then asked to suggest what they think that are the main causes (n = 104) or the main consequences (n = 104) of each of the three crimes. They were instructed

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[1]The reward for participating in the study was $1, based on the average value of rewards offered in MTurk studies of similar length as the current one at the time of the study.

to generate either at least three[2] causes or three consequences that they could naturally come up with without being repetitious. In the third experimental condition (n = 104), participants were presented with the same crime information, but were then instructed to move on to the next group of items, without engaging any further with it.

After the information-processing task, participants were asked about their current worry about falling victim of different types of crime (see Gray, Jackson, & Farrall, 2008; ICPR, 2011), the perceived likelihood of victimization (see Jackson, 2011; Warr, 1987), and their attitudes to social categorization (see Flecker et al., 2006; Zick et al., 2011).

Finally, participants were debriefed and thanked for their participation.

Measures and analysis

This section provides an overview of the variables[3] that are used in subsequent analyses, along with relevant descriptive statistics.

Worry about victimization

Participants' worry about falling victim of six crimes was measured via intensity-related items (see Jackson, 2004; Jackson & Gray, 2010; see also Hale, 1996), asking 'How worried, if at all, are you about falling victim of the following crimes: home burglary, terrorist attack, physical assault, mugging, pickpocketing, acquaintance violence'; the provided answers were as follows: 1 = not at all worried, 2 = a bit worried, 3 = fairly worried, 4 = very worried. A composite worry variable was computed and included in subsequent analyses (a = .86), averaging the estimates across the six crimes (M = 1.8, SD = .63).[4]

Perceived likelihood of victimization

Drawing on criminological research (see Jackson, 2011, 2013; Ferraro, 1995; Warr, 1987), perceived likelihood of victimization was measured by asking participants how likely, if at all, they thought it was to fall victim of the same crimes as in the previous question. A composite

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[2] The length of the text was almost the same in each case (story 1 = 81 words, story 2 = 81 words, story 3 = 82 words) in order to control for potential effects of features of the text on participants' answers to subsequent questions. See Appendix I for the exact wording of the vignettes.

[3] In all of the scales that were used in this study, the following measures were taken to prevent response bias and improve data quality (Furnham, 1986; Kalton & Schuman, 1982; Oppenheimer et al., 2009; Tourangeau, Rips, & Rasinski, 2000). Some of the scales included statements that asked participants not to choose any of the provided options in this particular item to screen out people who do random clicking. Only two respondents were found to do this relatively systematically, and they were dropped from the sample. Also, the statements of the scales were presented to participants in random order, using the randomization function of the Qualtrics software, which was used to build the study. This intended to overcome biases that relate to the ordering of the items. Finally, to overcome acquiescence bias, scale items were reversed in order to create balanced response sets in terms of positively and negatively worded questions.

[4] To evaluate the psychometric properties of the scales that are included in subsequent analyses, their dimensionality was also examined, using exploratory factors analysis (Bartholomew, Knott, & Moustaki, 2011; Furr, 2011). In all cases, a one-factor solution fitted the data well. Also, all the models that are tested here were run using the factor scores instead of the mean scores. As the differences were miniscule, it has been chosen to include the models with the mean scores here for analytical parsimony.

perceived likelihood variable (M = 1.9, SD = .59) was computed, by averaging the estimates across the six crimes (a = .81), and used in subsequent analyses.

Social categorization

Social categorization was operationalized as in-group identification, outgroup derogation, and racism, and measured via standardized attitudinal scales (Bodenhausen et al., 2012; Hewstone et al., 2002; Hogg, 2000, 2009). Regarding in-group identification (Flecker et al., 2006; Zick et al., 2011), participants were asked how much they agree or disagree with six statements, such as 'If you love your country, you must be ready to fight for it'. The provided answers ranged from 1 = agree strongly to 5 = disagree strongly, with higher values indicating lower levels of in-group identification. At the analysis stage, a composite in-group identification variable was used (M = 2.2, SD = .71), computed by averaging the estimates across the six statements (a = .82).

In a similar way, outgroup derogation (ibid.) involved participants' agreement or disagreement with six statements, such as 'Immigrants enrich our culture'. An overall outgroup variable (M = 3.5, SD = .92) was computed by averaging the estimates across the six statements (a= .92) to be included in the analysis, with higher values indicating lower levels of outgroup derogation.

Finally, racist attitudes (Flecker et al., 2006; Gaertner & Dovidio, 1986, 2000; Zick et al., 2011) were measured by asking participants to express their agreement or disagreement with five statements, such as 'There is a natural hierarchy between Black and White people'. Averaging the estimates across the statements (M = 3.6, SD = .82), a composite racism variable (a = .80) was calculated and included in data analyses, with higher values indicating lower levels of racist attitudes.

The analytical strategy that was employed was multiple linear regression analysis, which was conducted using Stata 14. To explore hypotheses 1– 3, the response variable was worry about victimization; to explore hypotheses 4– 5, the response variables were the indicators of social categorization bias. All the regression models were run using gender and age as covariates for these variables have been put forward as important 'predictors' of fear of crime in previous literature (see Hale, 1996); no important changes to the current results were found.

Results

Crime construal, information processing, and worry about victimization

The first objective of the current study was to explore the association between worry about victimization and the three modes of crime information processing (see Table 2, model 1), namely active consequences-focused, active causes-focused, and passive. It was found that worry about victimization was more likely to decrease for participants who passively processed the crime information, that is, read about real crimes without further engagement, compared to those who actively processed crime information by focusing either on consequences of the crime events (b = -.27, p = .002) or their causes (b = -.23, p = .008). Processing crime information by focusing on consequences vs. causes of real crime did not impact on the levels of worry about victimization. These findings support hypothesis 1, but not hypothesis 2.

Contrary to previous experimental work (see Gouseti, 2018), which found differential impact of 'causal' vs. 'consequential' way of thinking about crime events on worry about victimization, the current findings suggest that it is the passive mode of the crime information processing that relates to worry about victimization rather than the type of active processing (i.e., causal vs. consequential). It is assumed that these differences stem from the nature of the crime information that was used in the two experiments, which involved hypothetical crimes in the previous research and real crime events in the current one. Echoing previous criminological work (see Chiricos et al., 2000; Liska & Baccaglini, 1990; Sheley & Ashkins, 1981), these findings suggest that the nature of crime information influences the effect of information processing on worry about victimization.

Turning to psychological distance from crime (see Table 2, model 2), operationalized as perceived likelihood of victimization (Jackson, 2011; Todorov et al., 2007; Wakslak & Trope, 2009; Warr, 1987), it was first found that the higher the perceived likelihood of victimization, the higher the level of worry about victimization, other things being equal (b = .75, p < .001). The statistically significant direct effect of perceived likelihood of victimization on worry about victimization echoes previous research findings (see Jackson, 2011) and supports hypothesis 3a of the current study.

Table 2. Direct and interaction effects on worry about victimization

Variable	Model 1 Mean of worry	Model 2 Mean of worry	Model 3 Mean of worry
Passive crime information processing[a]	−0.23*** (0.09)	−0.14** (0.06)	0.37* (0.20)
Active, consequences-focused crime information processing[a]	−0.04 (0.09)	−0.05 (0.06)	0.33 (0.21)
Perceived likelihood of victimization		0.75*** (0.04)	0.89*** (0.07)
Passive crime information processing* Perceived likelihood of victimization[b]			−0.27** (0.11)
Active, consequences-focused crime information processing *Perceived likelihood of victimization[b]			−0.19** (0.10)
Constant	1.86*** (0.06)	0.38*** (0.09)	0.10 (0.14)
N	312	312	312
R²	0.04	0.53	0.54

Notes. [a] Reference category: active, causes-focused crime information processing.
[b] Reference category: Active, causes-focused crime information processing*Perceived likelihood of victimization.
Standard errors in parentheses.
***p < .01, **p < .05, *p < .1.

The indirect effect of perceived likelihood of victimization on the association between worry about victimization and crime construal was also examined (see Table 2, model 3). It was found that participants who actively processed crime information by focusing on the consequences of crime (active, concrete processing) were less likely to worry about falling victim of crime, when they perceived the likelihood of victimization as high, compared to those who actively processed the crime information by focusing instead on the causes (active, abstract processing)

of crime, (b = -.19, p = .05). Likewise, participants who passively processed the crime information by just reading about it (passive processing) were less likely to worry about falling victim of crime, when they perceived the likelihood of victimization as high, compared to those who actively processed the crime information by focusing instead on the causes (active, abstract processing) of crime, (b = - .27, p = .01). This finding supports hypothesis 3b.

It is assumed that active but abstract crime information processing creates a space for rumination about crime, which might be filled in by perceptions of victimization as likely, increasing in turn worry about victimization. More research is needed, however, to further explain this finding.

Crime information processing, worry about victimization and social categorization biases

The second objective of the current study was to explore whether crime information processing and worry about victimization are related to social categorization biases, namely in-group identification, outgroup derogation, and racist attitudes. More specifically, it was explored: (1) whether the mode of crime information processing is related to social categorization bias directly; (2) whether worry about victimization is related to social categorization bias directly; and (3) whether the level of crime information processing is related to social categorization bias indirectly via worry about victimization. The analytical strategy involved fitting simple and multiple linear regression models, where the three social categorization processes were regressed on worry about victimization and the level of crime information processing (see Figure 1).

It was found that the lower the level of worry about falling victim of crime, the lower the levels of in-group identification (b = - 0.32, p < .001), outgroup hostility (b = _ 0.28, p = .001), and racist attitudes (b = - 0.35, p < .001). These findings support hypotheses 5a, 5b, and 5c, suggesting that a deteriorating well-being at the individual level, reflected on high-intensity worrying about victimization, is related to social categorization biases that instantiate a deteriorating collective well-being (Gaertner & Dovidio, 2005; Hewstone et al., 2002; Hogg, 2000; Suh & Sung, 2009; Zick et al. , 2011). On the contrary, hypotheses 4a, 4b, and 4c were not supported by the data; crime information processing was not statistically significantly related to the three types of social categorization bias.

Conclusion

The first aim of the current study was to explore whether different modes of crime information processing (active vs. passive) relate to worry about victimization. It was found that participants who processed crime information passively, by reading about real crimes without further engagement with the information were less likely to worry about victimization compared to those who actively processed crime information by focusing on either causes or consequences of real crimes.
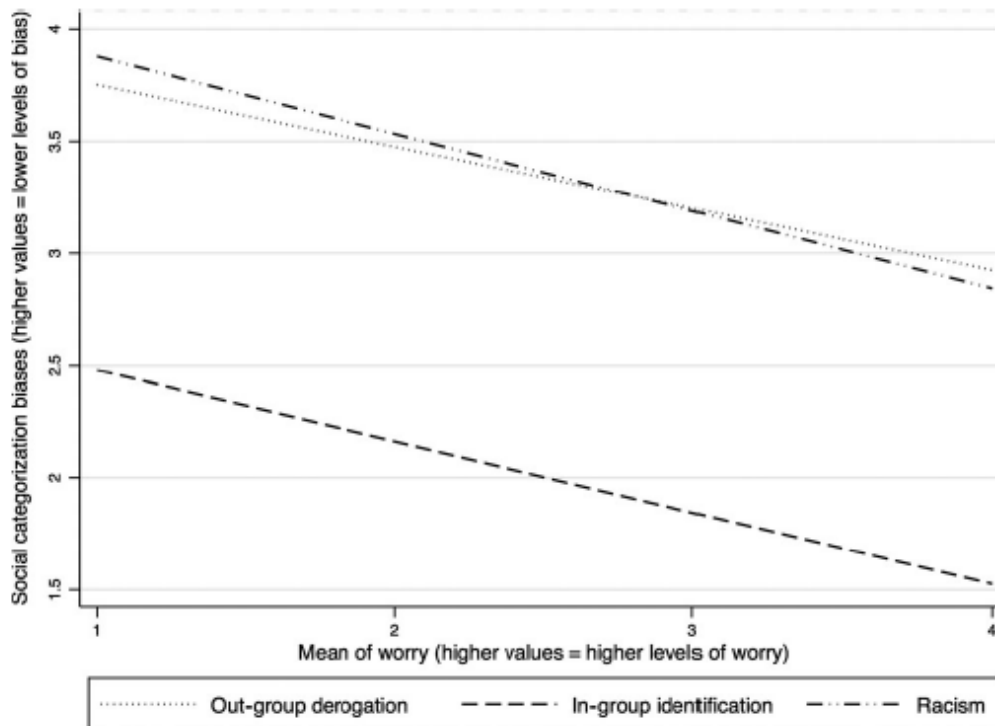
Figure 1. Fitted values of social categorization biases (higher values = lower levels of bias) by worry about victimization (higher values = more worry).

Moreover, it was found that perceived likelihood of victimization, as a proxy for psychological proximity to crime (Todorov et al., 2007; Wakslak &Trope, 2009), impacts on worry about victimization, and on its association with crime information processing. Participants who processed crime information actively by focusing on causes of crime were more likely to the worry about victimization (compared to those who processed crime information actively by focusing on consequences of crime and those who processed crime information passively), especially when they perceived the likelihood of victimization as high.

The second aim of the study was to examine whether crime information processing and worry about victimization are related to social categorization biases. The rationale is that worry about victimization as a proxy for deteriorating well-being at the individual level is damaging to collective well-being, which was operationalized through social categorization biases. The findings suggest that worry about victimization was a significant 'predictor' of in-group identification, outgroup derogation, and racist attitudes.

The association remained significant after controlling for different modes of crime information processing, which were not significantly related to social categorization biases.

Overall, these findings expand criminological literature on fear of crime in at least three ways. First, by testing the applicability of the construal-level theory of psychological distance and the uncertainty-identity theory in fear of crime research, they develop an interdisciplinary perspective that informs the theorization of the phenomenon. Second, by employing an experimental methodology, the current study expands the scope of fear of crime research, which typically employs survey methodology (Farrall, Bannister, Ditton, & Gilchrist, 1997).

Third, the current findings can help open up a discussion on the use of empirical evidence in public communication strategies in relation crime and the crime-risk.

The current results suggest that public communication about crime might not only inform people about it but also feed into worry about victimization. The argument has been raised before in criminological literature, suggesting that crime news, popular culture, and other sources of information about crime might impact on fear of crime (Chiricos et al., 2000; Liska and Baccaglini, 1990). The current study explores these ideas concretely by looking at different modes of crime information processing, and their impact on worry about victimization.

Overall, the findings indicate that to build discourses that are informative but not damaging to well-being, communication strategies about crime might need to take into account the nature of crime information (e.g., real vs. hypothetical) that is disseminated. For example, information about real crimes, such as crime news and crime statistics, that is presented in a manner that promotes passive engagement with it, by for example sticking to the facts without focusing on causes and consequences, might be an effective way to inform the public about crime without raising their worry about victimization.

On the contrary, information about hypothetical crimes, such as crime awareness campaigns and ads, might require more focus on the narratives that they use (e.g., abstract vs. detailed) to sensitize the public in a way that does not increase their worry about victimization. To do so, the provided information might need to focus on the 'big picture' of crime, such as the 'causes' of the phenomenon, rather than incidental and vivid details of individual events.

The current findings build on criminological research on the impact of public imagery and rhetoric about crime on people's perceptions of and reactions to crime, such as the 'moral panic' perspective (Cohen, 2001). Further research is needed to explore features of public discourses about crime (Hough, 2002, 2003) and modes of crime information processing (Lachman, Lachman, & Butterfield, 1979) that help people develop a clear and critical understanding about crime without increasing levels of fear of crime.

This work is characterized by limitations that are worth acknowledging. First, the findings are based on non-probability sampling, and thus, the results cannot be generalized beyond the observed data. Second, the current experimental design does not explore the duration of the observed impact of the different modes of crime information processing on worry about victimization. Third, the operationalization and measurement of the fear of crime involves only its affective component, and not its cognitive and behavioural components (Jackson, 2004; Hale, 1996; Vanderveen, 2006). These limitations open up interesting avenues for future research, which could explore whether the current findings are replicated in different cultural and methodological contexts.

Despite its limitations, the current study examined some novel questions in fear of crime research, namely how crime information processing is related to worry about victimization, and how worry about victimization is related to social categorization biases. The wider aim of this work is to contribute to a criminological research that will help develop evidence-based approaches to the public communication of crime through the use of crime information that does not rely on simplistic perspectives, populist ideologies, and stereotypical images of crime.

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Appendix:

Crime 1

The September 11 attacks were a series of four coordinated terrorist attacks by the Islamic terrorist group Al-Qaeda on the United States in New York City and the Washington, D.C. metropolitan area on Tuesday, September 11, 2001. The attacks killed 2,996 people, including 19 hijackers, and caused at least $10 billion in property and infrastructure damage. It was also the deadliest incident for firefighters and law enforcement personnel in the history of the United States, with 343 and 72 killed respectively.

Crime 2

On 24 August 2014, Michael Brown, an 18-year-old African American, was fatally shot by Darren Wilson, 28, a White police officer in Ferguson, Missouri, a northern suburb of St. Louis. The circumstances of the shooting of the unarmed Brown sparked tensions in the city, and protests and civil unrest erupted. The events received considerable attention in the United States and elsewhere, attracted protesters from outside the region, and generated a vigorous debate about the police use of force doctrine in Missouri and nationwide.

Crime 3

Amanda Blackburn, 28, was 12 weeks pregnant when she was shot in a home invasion, as she tried to protect herself and her one-year-old son, in Indianapolis on 10 November 2015. Amanda was found mortally wounded by her husband, pastor Davey Blackburn, after he returned home from the gym. She died later in hospital. Larry Taylor, 18 and Jalen Watson, 21, have been arrested and charged with her murder. A third suspect, Diano Gordon, 24, has been arrested in connection with burglary.