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The Effect of Distance on the Moral Judgment of Environmental Wrongdoings

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Abstract: Environment-related decisions can be taken *in situ* or remotely. We discuss theoretically why and how this seemingly irrelevant factor, i.e., the distance between the place of decision and the place where it is applied, affects the moral judgment by external third parties. We mobilize the out-group bias and the construal level theory to predict that distant decisions will be judged more severely than close equivalent ones. Using an experimental survey, we test whether an identical decision regarding an environmental wrongdoing is judged differently when observers are informed that the decision has been taken *in situ* or remotely. The findings support that the distance between decision centers and application places matters. An increase in spatial distance leads to a more severe judgment of an otherwise identical decision. We draw implications for business environmental strategy and suggest the existence of a liability of distance in the moral domain.

Key-words: CSR; distance; environmental wrongdoings; experimental survey; moral judgment; sustainability.

1. Introduction

In an increasingly globalized economy, several managerial decisions, including CSR-related ones, are discussed and taken in companies' headquarters and applied in remote production units. With the development of information and communication technologies, geographic distance could seem secondary but empirical evidence shows that the distance effects are far from being insignificant (e.g., Kalnins and Lafontaine, 2013).

When decisions relate to environmental actions, especially unethical ones (e.g. pollution, deforestation), this spatial disconnection is frequently a source of tensions and misunderstandings. For instance, in relation with biodiversity related decisions, Mc Neely (1998, p. 9) reports that "local people are angry that those who are living far away are making decisions for them or that affect them". Similarly, according to the FAO (2003), many of the greatest threats to biological diversity are caused by distant policy measures. Remote decisions and their consequences affect the environment and local communities and impact the degree of public scrutiny and likelihood of getting a 'social license to operate' (Andriamihaja et al., 2019; see also Kolk et al., 2010 and Gray et al., 2020). Interestingly, some contributions have discussed how distance affects layoff decisions, another dimension of corporate social (ir)responsibility. Downsizing decisions have an emotional dimension, that may push executives to prefer layoff in distant units, to reduce the "social threat" caused by close layoffs. Distance can help executives to manage their guilt feelings, making distant layoffs more likely *ceteris paribus* (Barban, 2010; see also Wright and Barling, 1989).

As far as we know, there is limited knowledge regarding the possible impact of spatial distance on moral judgment of environmental decisions, especially when one considers the distance between the location of the decision maker and the place where the decision is implemented. At the same time, when media report environmental wrongdoings, they frequently emphasize the supposed role(s) of decision makers who are either located at the place where the decision is implemented or elsewhere, sometimes far away. For instance, the coverage of the Dieselgate scandal exposing the massive cheating of emission tests in the U.S.A frequently discussed the role played by the Volkswagen former CEO, Martin Winterkorn, located in Germany.

In this article, we fill this gap and explore whether and how the distance from which an environmental-related decision is taken matters in the moral judgment of this decision by third parties, all other things being equal. A conventional principle would be that similar wrongdoings deserve the same moral judgment, regardless of the distance at which the decision is taken, but real reactions could differ (see e.g., Burgoon et al., 2013). From a rational perspective, the distance at which the decision is taken *per se* should not influence agents' judgments and behaviors, but recent contributions based on a *homo heuristicus* perspective support that subtle and apparently unrelated factors can affect agents' perceptions and decisions (e.g., Gray et al., 2020; Ling et al., 2021).

We discuss conceptually why and how this seemingly irrelevant factor, i.e., distance between the place of decision and the place where the consequences of the decision occur, could affect the moral judgment by external observers. Moreover, using an experimental survey, we examine whether people judge differently an environmental wrongdoing, precisely, polluting a river and illegally destroying a forest, when they are informed that the decider took the decisions *in situ*, locally or far away from the place where they are applied or enforced. All parameters remain fixed (e.g., pollution size, decision responsibility and

consequences), except the distance from which the decision is taken. The findings support that the distance between decision centers and application places matters in the moral judgment of environmental wrongdoings.

The next section develops the theoretical framework regarding the effect of distance on moral judgment and draws a main testable hypothesis. Section 3 describes the experimental design, provides the main results, and discusses them. Section 4 gives several implications. Section 5 provides some limitations of our study, proposes extensions and concludes.

2. Theoretical framework and hypothesis development

The literature on moral judgment has mainly used rationalist models. These models posit that deliberate and conscious moral reasoning causes moral judgment (Kohlberg and Hersh, 1977). In other words, moral judgment results from System 2 processing that has been described as slow, controlled, effortful, rational and rule-governed. The rational perspective assumes individuals who deliberate consciously and apply consistently general principals to form moral judgments. The social intuitionist model challenges this perspective and argues that moral reasoning does not cause moral judgment. In this perspective, moral judgment results from quick, automatic evaluations (intuitions) that are subject to social and cultural influences (Haidt, 2001; Hauser, 2006). In this perspective, moral judgment is more the product of System 1 processing that has been described as fast, automatic, effortless and associative. Moral reasoning constitutes a *post hoc* construction that arises after the judgment, to possibly justify it. This social intuitionist model recognizes that seemingly irrelevant factors can interfere with the moral judgment and explain substantial deviations from the rationalist predictions.

From a rational viewpoint, the universality of moral judgment is frequently endorsed and implies that the distance at which the decider takes his/her decision should not matter. At the same time, there is a sizeable literature that supports that seemingly irrelevant factors influence the moral judgment of wrongdoings such as the victim identifiability or the outcome bias (Gino et al., 2010), the creativity in unethicity (Wiltermuth et al., 2017), the language in which the problem is described (native versus foreign language) (Hayakawa et al., 2017), the number of wrongdoers (Grolleau et al., 2020), and the use of euphemisms (Farrow et al., 2021).

We argue that spatial distance could also influence intuitions for at least two reasons, precisely because of the out-group bias and the distance-construal effect. In what follows, we develop briefly these two mechanisms to expose how they could influence moral judgment of observers on a given unsustainable action.

First, spatial distance can serve as a social categorization criterion and allow to distinguish in-group versus out-group members or deciders (Tajfel and Turner, 1985). The social identity theory posits that individuals use similar versus distinct characteristics to identify and categorize individuals, including themselves, into in-groups versus out-groups (Tajfel and Turner, 1985). These social categories or divisions of the social world into distinct groups provide agents with a way to define themselves and others. Perceived proximity – in our case spatial proximity – can serve as a natural criterion to define the in-group to which the concerned individual or identity belongs (Hogg and Abrams, 1998). An intuitive in-group could be inhabitants from the same city or region versus those who live elsewhere. Of course, all out-groups are not created equal, given that out-groups can differ according to their distance (in a broad meaning) to the considered in-group. Thanks to this self-categorization and comparison, an individual's social identity is enhanced when his/her in-group is perceived to be better than the out-group (Tajfel and Turner, 1985). An important outcome of this

categorization is in-group favoritism and out-group prejudice, because in-group members tend to deflate the bad deeds and inflate the good deeds performed by in-group members while they will inflate the bad deeds of out-group members and downplay their good deeds (Tajfel and Turner, 1985). Simply said, the same wrongdoing will be judged as less unethical (more unethical) when the wrongdoer is considered as an in- (out-) group member. For instance, environmental violation events have been found to cause more reputational damage to foreign-owned enterprises (out-group) than to domestic-owned firms (in-group) (Zou et al., 2015).

In our context, decision makers *in situ* are more likely to be considered as in-group members *ceteris paribus* when compared to decisions makers located far away and even more if they are located abroad. Because of the in-group favoritism and out-group prejudice (“we” versus “they”), we predict that the same unethical decisions by distant executives will be perceived as more unethical than the same decisions taken by local or *in situ* executives.

Second, according to the Construal Level Theory (CLT) (Liberman and Trope, 2008; Leiser et al., 2008; Trope and Liberman, 2010), situations (i.e., people, events, objects) are construed or mentally represented at different abstractness levels or “levels of construal”, from the concrete to the abstract. High-level construals are “relatively abstract, coherent, and superordinate mental representations, compared with low-level construals” (Trope and Liberman, 2010). For instance, “pollution” can be represented as “an environmental degradation” (abstract, high-level construal) or as “an oil spill” (concrete, low-level construal). An increase in the psychological distance of a situation generates a higher level of construal. In other words, this theory posits that psychologically distant situations are construed more abstractly, while proximal or close situations are construed in a more concrete, detailed, contextual fashion (Liberman and Trope, 2008; Trope and Liberman, 2010). Indeed, a higher psychological distance (proximity) causes individuals to focus more

on the abstract and holistic (concrete and detailed) features of the situation. An abstract mindset will make people more focused on desirability whereas a concrete mindset will make themselves more focused on feasibility. For instance, Ding et al. (2021) found supporting evidence that reduced visibility due to atmospheric pollution causes individuals to favor desirability over feasibility in product tradeoffs. This psychological distance can be social (between the individual and other people), temporal (between the present and the past or the future), spatial (between the close and the remote location) or hypothetical (between experiencing something and imagining it).

Interestingly, CLT-based research has examined the effect of psychological distance on peoples' moral judgment. By assuming that moral principles have an abstract nature, they are supposed to generate a higher impact on moral judgment of distant situations (Eyal et al., 2012; Tumasjan et al. 2011). The higher (lower) the psychological distance, the more (less) severe the moral judgment (Eyal et al., 2008; see also Burgoon et al., 2013; Mårtensson, 2017). Subsequent research has confirmed these results (Agerström and Björklund, 2009a, 2009b; Tasmajan et al., 2011).¹ The authors advance that a psychological distance perspective causes a more abstract thinking that relegates circumstantial considerations (e.g., preserving jobs and the local economy) to the background. As a result, moral principles are more (less) influential in morally distant (close) situations (Eyal et al., 2008; Tumasjan et al., 2011). In short, the CLT theory predicts that an increase in the spatial distance will cause a more severe judgment of an unethical act compared to the same unethical act performed at a closer location.

On the basis of the preceding discussion on the out-group bias and psychological distance effect, we formulate our hypothesis on the moral judgment by onlookers as follows:

¹ To make justice to this issue, some papers have questioned the results of Eyal et al. (2008) such as Gong and Medin (2012) and Žeželj and Jokić (2014) (see also the reply of Eyal et al., 2014).

The more distant the decider is from the application place when s/he takes the decision for an environmental wrongdoing, the more severe the observers' moral judgment on his/her decision is. Equivalently, the closer the decider is from the application place when s/he takes the decision for an environmental wrongdoing, the less severe the observers' moral judgment on his/her decision is.

3. Experimental survey

3.1. Participants and design

In November 2019, 182 individuals² participated voluntarily and without any monetary compensation to the experimental survey (49.4% male, $M_{age} = 31.8$ years). Indeed, other scholars (e.g., Thaler, 1987; Camerer and Hogarth, 1999; Rubinstein, 2013) provided evidence suggesting that non-incentivized experiments can be sufficient when the researchers' objective is to better understand some specific preferences or “only want to confirm [or not] the existence of a plausible pattern of reasoning” (Rubinstein, 2001, p. 626). This method is relevant given that we are interested in moral judgment that individuals form when they face news reporting corporate decisions on environmental issues.

Participants from a convenience sample (e.g., friends, students, family members, acquaintances)³ were invited by e-mail to participate to an online survey by clicking on a link.

² Using the G*Power program (<http://www.psychologie.hhu.de/arbeitsgruppen/allgemeine-psychologie-und-arbeitspsychologie/gpower.html>), 158 participants were required given a 0.80 statistical power and an effect size of 0.25.

³ Given the survey nature, there were no specific selection criteria to participate. Indeed, anyone was likely to form a judgment on an accused company. Participants were just asked once to complete a survey and were not informed about the underlying question or tested hypotheses. Although we cannot formally discard a selection bias (e.g., only people interested in environmental issues responded to the survey), its effect on results, if any,

Regarding the use of such a sample, we concur with Krupnikov et al. (2021, p. 165) who concluded that “while there are justified concerns that scholars should be aware of when using convenience samples, much of the empirical research suggests that they provide valid results for experimental treatment effects that reliably replicate across more representative probability samples”.

After reading a brief introduction informing them to carefully read the scenarios and give their honest opinion as there is no wrong or right answer, participants were confronted to two realistic scenarios previously used in the literature (Grolleau et al., 2020): a river pollution by a company and an illegal deforestation by a real estate developer (see the appendix for more details). We selected these two scenarios because their consequences are public bads which are more likely to elicit universal values. These two environmental domains can also be considered as a robustness check regarding a possible impact of distance on moral judgment. Participants were asked to indicate the (im)morality of these two actions on a 7-point Likert scale (1: completely moral; 7: completely immoral). The two scenarios were displayed to participants in a fixed order. It is worthy to note that despite some criticisms, several scholars (Thaler, 1987; Thaler, 2015) concluded to the usefulness of hypothetical scenarios in leading to significant path-breaking contributions, notably with regards to issues related to business ethics (Weber, 1992).

3.2. Procedure

We used a between-subjects design. We designed three treatments by manipulating the distance between the location where the pollution (respectively, deforestation) occurs and the

should be limited given that we are only interested in differences across treatments and not in levels per se.

Moreover, in terms of gender and age, our sample has characteristics similar to the whole French population (48.4% male, $M_{age} = 42.2$ years) (Source: <https://www.insee.fr/fr/statistiques/>).

location of the manager (respectively, developer) who takes the decision. In treatment T1, the manager/developer is located *in situ*. In treatment T2, s/he is located locally, that is, at 10 km from the production site. In treatment T3, s/he is located at 900 km from the production site. This last distance is realistic, allows to remain in the same country (France) and corresponds to the distance between several major French cities (e.g., Paris-Nice, Nantes-Marseilles, Bordeaux-Metz, or Toulouse-Lille). Concretely, the Scenario 1 was formulated as follows:

“An agrifood factory has thrown 20,000 liters of whey in a nearby river. Throwing whey into water streams is prohibited by law because it constitutes a source of pollution. Whey causes fermentation of organic matter and a decrease of the dissolved oxygen content of the water, leading to fish mortality, a loss of biodiversity, and unpleasant odors. However, no harm to humans has been found.

The decision to throw the whey has been taken by the company’s executive from the company’s headquarter located [*T1: on the production site / T2: at 10 km from the production site / T3: at 900 km from the production site*].”

The wording difference between the three treatments was kept to the minimum and relates only to the distance from which the decision has been taken.

3.3. *Econometric estimation*

The effect of distance on the moral judgment is analyzed twofold. First, we examine whether mean responses across treatments are significantly different using a multiple hypothesis testing (List et al., 2019). Unlike a two-by-two comparison of treatments, this statistical technique provides an adjusted (and more reliable) p-value of a test comparing all treatments simultaneously. Second, in order to control for individuals’ heterogeneity, we examine the

effect of distance using a linear regression estimation (Greene, 2003). Let us assume that Y_i is our dependent variable corresponding to the moral judgment for each scenario. The equation model can be written as: $Y_i = X_i\beta + \varepsilon_i$, where X_i is the vector of exogenous variables (treatment, age, gender, education, and earnings) and ε_i is the disturbance term, which is assumed to be normally distributed with zero mean.

3.4. Main results

Table 1 presents average judgment rates per treatment for each scenario. For both scenarios, we observe an increase of the perceived immorality as distance between the site and location of the manager increases. In other words, when the manager/developer who takes the decision to pollute/deforest is far from the pollution/deforestation site, his/her decision is perceived as more immoral. For instance, in the river pollution scenario, the moral judgment is more severe on a seven-point scale when the decider is far away from the site compared to the *in situ* decider (6.8 versus 6.13).

Controlling for multiple hypotheses testing, that is, a simultaneous comparison of all treatments (List et al., 2019), all differences go in the expected direction and are statistically significant, except between T2 and T3 in scenario 2 (cf. Table 2). Indeed, the difference between moral judgment of deforestation is almost the same when decided by a close developer or far away one (6.53 versus 6.58). This result could suggest that the effect of distance can correspond more to a step function rather than a linear one, especially for some environmental domains. In short, our hypothesis is supported. The distance between the decision making and application site matters. Concretely, decisions by remote deciders are judged more severely than those made *in situ* or close to the production site. Our findings also indicate that when they take the decision for an environmental wrongdoing, deciders that are close to the application place could benefit from a less severe moral judgment by observers.

Simply said, when the incriminated behavior remains fixed, the distance (or the perception of distance) at which the decision is taken, is not a neutral matter to form a moral judgment.

[Insert Tables 1 and 2 around here]

As mentioned above, we also conducted a linear regression to analyze the effect of distance, controlling for individuals' characteristics (Table 3). We show that the decision of a manager/developer to undertake an environmental wrongdoing on a far distant production site is perceived to be more immoral. The results remain robust for both scenarios. When the decision maker is close to the implementation place (i.e., 10 km), the effect of distance on moral judgment is not statistically significant. This result may indicate the existence of a tipping point, from which distance indicates that the decision maker belongs to an out-group and/or cause a higher construal level. This non-linear relationship is very interesting and implies that being *in situ* is not always the only solution, given that a similar outcome can be obtained if the decider is closely located. Regardless of legal considerations, being perceived as a local decider is a strategic parameter that can deliver unexpected benefits such as a more lenient judgment on otherwise identical acts.

Interestingly, regarding control variables, we found that men are more severe in their moral judgments than women, particularly with regards to river pollution. This result could seem surprising given that several contributions emphasize the higher level of environmental friendliness among women (e.g., Brough et al., 2016 and references therein; see also Glass et al., 2016; Nadeem et al., 2020 about female leaders). Noteworthy, this finding of previous studies is related to women's attitudes and behaviors, not to their moral judgment of others' decisions in the environmental realm. Given its surprising nature, this result is a call to

investigate how gender influences moral judgment, especially when *a priori* irrelevant factors such as the distance from which the decision is taken are introduced in the context.

[Insert Table 3 around here]

Last but not least, our findings can be considered as conservative, because the experimental manipulation was minimal. A higher emphasis on distance, as what readers can see in newspapers reporting real-world situations, is likely to increase the effect magnitude.

4. Implications

Our findings suggest that decision makers are not evaluated only as a function of their decision content. Concerned parties such as neighbors, local communities and other external observers also consider the circumstances in which the decision is reached, such as the distance between the decision making and the application places. Indeed, distance can prevent observers to consider circumstantial considerations (e.g., saving jobs in ‘our’ region, preserving the local economy) that could mitigate the severity of their moral judgment. Our results suggest the existence of a ‘moral’ liability of distance.

A main implication of our findings is that communicating about the decision spatial origin is not neutral, especially in an increasingly globalized world. Providing voluntarily or not indications about the decision spatial origin can favorably or unfavorably influence the moral judgment of third parties. More precisely, increasing the perceived distance from which the unethical decision has been taken can make local observers judging it more severely. Consequently, some agents can be tempted to manipulate, even artificially, the spatial origin in order to reduce a negative judgment on their actions and facilitate related operations such as the continuation of the social license to operate. Conversely, some agents can have a clear interest in emphasizing that the decisions at stake have been made remotely, such as a

company willing to disadvantage a competitor (or a local NGO willing to accentuate the caused harm) by emphasizing that the unethical decision of this rival has been taken far away. The words used in communication can offer a low-cost tactic to influence distance perceptions and subsequent reactions (see Farrow et al., 2018 for a general analysis). For instance, using local expressions and idioms may influence the perceived proximity of the decider.

Communicating about environmental decisions is not only an issue of content, but also a matter of context. Among contextual factors, we found convincing support that the moral judgment of environmentally undesirable decisions and their potential consequences (getting and keeping the “social license” to operate) can be influenced by the perceived distance from which the decision is taken.

Another implication suggested by our findings can be the strategic foresight of a competent court to judge environmental wrongdoings, where companies can seek to defend their case within a jurisdiction where they are more likely to benefit from a non-conscious preferential treatment, because of geographic closeness.

In some circumstances, attempting to debias individuals makes sense (Lilienfeld et al., 2006). Various tactics can be used such as informing the participants on the bias or proposing a joint evaluation with distant and close decision places. Understanding how people react to geographic information regarding the decision location could offer a lever to influence how moral judgment will be formed. This effect is unlikely to reverse the valence of a moral judgment but can serve to shape its magnitude. Some influencers can even seek to bring closer decision and application places, by giving general orientations but delegating end decision (e.g., implementation details) at closer locations. This strategy can be implemented by multi-unit companies that will take into account how the perception of deciders’ location can play for or against them.

5. Conclusion

Using a survey experiment, we found supporting evidence that the spatial distance from which an unfriendly environmental decision is taken influences the moral judgment of this decision. There is an increase in severity when the decision maker is located far away from the place where the decision will be implemented. Our findings suggest that in some situations being *in situ* or close enough is sufficient to trigger a kind of local advantage. Indeed, being (perceived as) close led observers to form a less severe judgment on an otherwise identical environmental wrongdoing. This proximity can be instrumentalized to justify decisions that would be otherwise more difficult to accept or to preserve the social license to operate. For instance, a company can attempt to manipulate the decider location in media reports, to increase closeness, even if it is somewhat artificial. This goal can be reached by requiring top executives from a given unit to have a physical accommodation and public presence in the unit area, even if it is more cosmetic than real.

Nevertheless, this contribution has some limitations that indicate avenues for promising extensions. First, we examined moral judgment, but it will be relevant to study how these moral concerns affect related behaviors, such as signing a petition or participating in a protest march against the concerned behaviors. Second, distance can be perceived as continuous or discontinuous and a better understanding of the (linear or non-linear) relationship between distance and moral judgment over various levels is necessary to identify tipping points, if any. Third, a remaining issue is whether our findings extend to other distance dimensions such as temporal distance (today decision versus one month- or year-old decision or even compared to future decisions) or social distance (decision taken by top management versus identical decision taken by a lower ranked employee) (see Leiser et al., 2008). An interesting avenue could be to test whether other localness indicators (e.g., family name or geographic/ethnic origin of top executives) lead to similar outcomes. If supported,

these results can influence recruitment decisions on unexpected dimensions. Fourth, the effect of distance can also be considered for a broader range of sustainable or unsustainable decisions, either in the environment domain but also in non-environmental domains such as fraud or corruption. We examined the effect of distance on forms of corporate irresponsibility but it makes sense to see whether a similar effect exists for corporate social responsibility. For instance, efforts to reduce CO₂ emissions at a given plant or investing in children's hospitals *ceteris paribus* can be judged differently if the decider is *in situ* or close to the plant compared to a remote decider. Last but not least, studying this distance-moral judgment relationship in various cultural contexts could elucidate a more complex reality.

References

- Agerström, J., & Björklund, F. (2009a). Moral concerns are greater for temporally distant events and are moderated by value strength. *Social Cognition, 27*, 261–282.
<https://doi.org/10.1521/soco.2009.27.2.261>
- Agerström, J., & Björklund, F. (2009b). Temporal distance and moral concerns: Future morally questionable behavior is perceived as more wrong and evokes stronger prosocial intentions. *Basic and Applied Social Psychology, 31*, 49–59.
<https://doi.org/10.1080/01973530802659885>
- Andriamihaja, O. R., Metz, F., Zaehring, J. G., Fischer, M., & Messerli, P. (2019). Land competition under telecoupling: Distant actors' environmental versus economic claims on land in North-Eastern Madagascar. *Sustainability, 11* (3), 851.
<https://doi.org/10.3390/su11030851>
- Barban, N. (2010). How far can you go? Rationality models in layoff location. Master Thesis. Department of Organization and Strategy, Faculty of Economics and Business Administration, Tilburg University. <http://arno.uvt.nl/show.cgi?fid=112891>
- Brough, A. R., Wilkie, J. E. B., Ma, J., Isaac, M. S., & Gal, D. (2016). Is eco-friendly unmanly? The green-feminine stereotype and its effect on sustainable consumption. *Journal of Consumer Research, 43* (4), 567–582, <https://doi.org/10.1093/jcr/ucw044>
- Burgoon, E. M., Henderson, M. D., & Wakslak, C. J. (2013). How do we want others to decide? Geographical distance influences evaluations of decision makers. *Personality and Social Psychology Bulletin, 39* (6), 826–838. <https://doi.org/10.1177/0146167213481247>
- Camerer, C., & Hogarth, R. (1999). The effect of financial incentives in experiments: A review and capital-labor production framework. *Journal of Risk and Uncertainty, 19* (1), 7–42. <https://doi.org/10.1023/A:1007850605129>

- Ding, Y, Zhong, J, Guo, G, & Chen, F. (2021). The impact of reduced visibility caused by air pollution on construal level. *Psychology & Marketing*, 38, 129–141.
<https://doi.org/10.1002/mar.21427>
- Eyal, T., Liberman, N., & Trope, Y. (2014). Thinking of why a transgression occurred may draw attention to extenuating circumstances: A comment on Žeželj & Jokić replication. *Social Psychology*, 45(4), 329–331.
- Eyal, T., & Liberman, N. (2012). Morality and psychological distance: A construal level theory perspective. In Mikulincer, M. & Shaver, P. R. (Eds.), *The Social Psychology of Morality: Exploring the Causes of Good and Evil* (pp. 185–202).
- Eyal, T., Liberman, N., & Trope, Y. (2008). Judging near and distant virtue and vice. *Journal of Experimental Social Psychology*, 44 (4), 1204–1209.
<https://doi.org/10.1016/j.jesp.2008.03.012>
- FAO. (2003). State of the world's forests. <http://www.fao.org/3/y7581e/y7581e.pdf>
- Farrow, K., Grolleau, G., & Mzoughi, N. (2018). What in the word! The scope for the effect of word choice on economic behavior. *Kyklos*, 71 (4), 557–580.
<https://doi.org/10.1111/kykl.12186>
- Farrow, K., Grolleau, G., & Mzoughi, N. (2021). ‘Let's call a spade a spade, not a gardening tool’: How euphemisms shape moral judgment in corporate social responsibility domains. *Journal of Business Research*, 131 (C), 254–267.
<https://doi.org/10.1016/j.jbusres.2021.04.002>
- Gino, F., Shun L. L., & Bazerman, M. H. (2010). Nameless + harmless = blameless: When seemingly irrelevant factors influence judgement of (un)ethical behavior. *Organizational Behavior and Human Decision Processes*, 111 (2), 93–101.
<https://doi.org/10.1016/j.obhdp.2009.11.001>

- Glass, C., Cook, A., & Ingersoll, A. R. (2016). Do women leaders promote sustainability? Analyzing the effect of corporate governance composition on environmental performance. *Business Strategy and the Environment*, 25(7), 495–511. <https://doi.org/10.1002/bse.1879>
- Gong, H., & Medin, D. L. (2012). Construal levels and moral judgment: Some complications. *Judgment and Decision Making*, 7, 628–638.
- Gray, S. G., Sütterlin, B., Siegrist, M., & Árvai, J. (2020). The benefit of virtue signaling: Corporate sleight-of-hand positively influences consumers' judgments about "social license to operate". *Journal of Environmental Management*, 260 (C), 110047. <https://doi.org/10.1016/j.jenvman.2019.110047>
- Greene, W. (2003). *Econometric Analysis*. Prentice-Hall, Upper Saddle River, NJ.
- Grolleau, G., Ibanez, L., & Mzoughi, N. (2020). Moral judgement of environmental harm caused by a single versus multiple wrongdoers: A survey experiment. *Ecological Economics*, 170, 106586. <https://doi.org/10.1016/j.ecolecon.2019.106586>
- Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgement. *Psychological Review*, 108 (4), 814–834. <https://doi.org/10.1037/0033-295x.108.4.814>
- Hayakawa, S., Tannenbaum, D., Costa, A., Corey, J. D., & Keysar, B. (2017). Thinking more or feeling less? Explaining the foreign language effect on moral judgement. *Psychological Science*, 28 (10), 1387–1397. <https://doi.org/10.1177/0956797617720944>
- Hauser, M. D. (2006). The liver and the moral organ. *Social Cognitive and Affective Neuroscience*, 1 (3), 214–220. <https://doi.org/10.1093/scan/nsl026>
- Kalnins, A., & Lafontaine, F. (2013). Too far away? The effect of distance to headquarters on business establishment performance. *American Economic Journal: Microeconomics*, 5 (3), 157–179. <https://doi.org/10.1257/mic.5.3.157>

- Kohlberg, L., & Hersh, R. H. (1977). Moral development: A review of the theory. *Theory Into Practice*, 16 (2), 53–59. <https://www.jstor.org/stable/1475172>
- Kolk, A., Hong, P., & Van Dolen, W. (2010). Corporate social responsibility in China: An analysis of domestic and foreign retailers' sustainability dimensions. *Business Strategy and the Environment*, 19(5), 289–303. <https://doi.org/10.1002/bse.630>
- Krupnikov, Y., Nam, H., & Style, H. (2021). Convenience samples in political science experiments. In J. Druckman & D. Green (Eds.), *Advances in Experimental Political Science* (pp. 165-183). Cambridge: Cambridge University Press.
- Leiser, D., Azar, O. H., & Hadar, H. (2008). Psychological construal of economic behavior. *Journal of Economic Psychology*, 29 (5), 762–776. <https://doi.org/10.1016/j.joep.2008.08.002>
- Lilienfeld, S. O., Ammirati, R., & Landfield, K. (2009). Giving debiasing away: Can psychological research on correcting cognitive errors promote human welfare? *Perspectives on Psychological Science*, 4 (4), 390–398. <https://doi.org/10.1111/j.1745-6924.2009.01144.x>
- Ling, M., Xu, L. & Xiang, L. (2021). Social-contextual influences on public participation in incentive programs of household waste separation. *Journal of Environmental Management*, 281 (6), 111914. <https://doi.org/10.1016/j.jenvman.2020.111914>
- List, J. A., Shaikh, A. M., & Xu, Y. (2019). Multiple hypotheses testing in experimental economics. *Experimental Economics*, 22 (484), 773–793. <https://doi.org/10.1007/s10683-018-09597-5>
- Mårtensson, E. (2017). Construal level theory and moral judgements: How thinking abstractly modifies morality. *Journal of European Psychology Students*, 8 (1), 30–40. <http://doi.org/10.5334/jeps.413>

- Nadeem, M., Bahadar, S., Gull, A. A., & Iqbal, U. (2020). Are women eco- friendly? Board gender diversity and environmental innovation. *Business Strategy and the Environment*, 29(8), 3146–3161. <https://doi.org/10.1002/bse.2563>
- McNeely, J. A. (1998). Major Conservation Issues of the 1990s: Results of the World Conservation Congress Workshops. IUCN, Gland, Switzerland and Cambridge, UK. vii + 203 pp. <https://portals.iucn.org/library/sites/library/files/documents/WCC-1st-004.pdf>
- Rubinstein, A. (2013). Response time and decision making: An experimental study. *Judgment and Decision Making*, 8 (5), 540–551.
- Rubinstein, A. (2001). A theorist’s view of experiments. *European Economic Review*, 45 (4-6), 615–628. [https://doi.org/10.1016/S0014-2921\(01\)00104-0](https://doi.org/10.1016/S0014-2921(01)00104-0)
- Tajfel, H., & Turner, J. C. (1985). The social identity theory of inter-group behavior. In Worchel, S., & Austin, L. W. (Eds), *Psychology of Intergroup Relations*. Nelson-Hall.
- Thaler, R. (1987). The psychology of choice and assumptions of economics. In Roth, A. (Ed), *Laboratory Experimentation in Economics: Six Points of View*. Cambridge: Cambridge University Press.
- Thaler, R. (2015). *Misbehaving: The Making of Behavioral Economics*. W.W. Norton Company.
- Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review*, 117 (2), 440–463. <https://doi.org/10.1037/a0018963>
- Tumasjan, A., Strobel, M. & Welpe, I. (2011). Ethical leadership evaluations after moral transgression: Social distance makes the difference. *Journal of Business Ethics*, 99, 609–622. <https://doi.org/10.1007/s10551-010-0671-2>
- Weber, J. (1992). Scenarios in business ethics research: Review, critical assessment, and recommendations. *Business Ethics Quarterly*, 2 (2), 137–159. <https://doi.org/10.2307/3857568>

- Wiltermuth, S. S., Vincent, L. C., & Gino, F. (2017). Creativity in unethical behavior attenuates condemnation and breeds social contagion when transgressions seem to create little harm. *Organizational Behavior and Human Decision Processes*, 139, 106–126. <https://doi.org/10.1016/j.obhdp.2017.01.006>
- Wright, B., & Barling, J. (1998). “The executioners’ song”: Listening to downsizers reflect on their experiences. *Canadian Journal of Administrative Sciences*, 15, 339–354. <https://doi.org/10.1111/j.1936-4490.1998.tb00176.x>
- Žeželj, I. L., & Jokić, B. R. (2014). Replication of experiments evaluating impact of psychological distance on moral judgment: (Eyal, Liberman & Trope, 2008; Gong & Medin, 2012). *Social Psychology*, 45(3), 223–231. <http://dx.doi.org/10.1027/1864-9335/a000188>
- Zou, H. L., Zeng, R. C., Zeng, S. X., & Shi, J. J. (2015). How do environmental violation events harm corporate reputation? *Business Strategy and the Environment*, 24 (8), 836–854. <https://doi.org/10.1002/bse.1849>

Table 1. Moral judgment - Mean responses by scenario and treatment

	T1: On site (N=60)		T2: Near site (N=62)		T3: Far from site (N=60)	
	Mean	SD	Mean	SD	Mean	SD
Scenario 1 (river pollution)	6.13	0.98	6.51	0.93	6.8	0.44
Scenario 2 (deforestation)	6.06	1.13	6.53	0.93	6.58	0.76

Table 2. Moral judgment - Multiple hypothesis testing (simultaneous comparisons of all treatments)

Compared treatments	Scenario 1 (river pollution)			Scenario 2 (deforestation)		
	Difference in means	p-values		Difference in means	p-values	
		Unadjusted	Adjusted		Unadjusted	Adjusted
T1 vs. T2	0.38	0.03	0.05	0.46	0.01	0.02
T1 vs. T3	0.66	0.00	0.00	0.51	0.00	0.00
T2 vs. T3	0.28	0.05	0.05	0.05	0.74	0.74

Table 3. Linear regression of the effect of distance by scenario (Dependent variable: moral judgment)

	Scenario 1 (river pollution)	Scenario 2 (deforestation)
In situ (Ref)	-	-
Close (10 km)	0.235	0.267
Far (900 km)	0.531***	0.356*
Age (continuous)	-0.000	0.010*
Gender (=1 if female)	-0.400***	-0.256*
Education		
Cat. 1 (Ref)	-	-
Cat. 2	-0.138	-0.201
Cat. 3	-0.350**	-0.230
Earnings		
Cat. 1 (Ref)	-	-
Cat. 2	0.075	0.167
Cat. 3	0.008	-0.315
Cat. 4	0.293	0.078
Constant	6.537***	6.149***
Observations	168	168
F	3.71***	2.77***
R2	0.1745	0.1364

For the variable Education, Cat. 1 to 3 refer to French baccalaureate or less, between 1 and 3 years of university studies, and 4 years or more of university studies, respectively. For the variable Earnings, Cat. 1 to 4 refer to < 500€/month, between 500€ and 1000€/month, between 1001€ and 1500€/month, and > 1500€/month, respectively. ***, ** and * refer to significance at the levels of 1%, 5% and 10% respectively.

Appendix: Survey translation

[Note: This is the text sent to the participants assigned to the treatment T1 (in situ). Participants to treatments T2 and T3 were informed that the company's headquarter (or the developer's office in Scenario 2) was respectively located at 10 km and 900 km from the production site (or the area in Scenario 2).]

(There is no right or wrong answer. The scenarios described below are hypothetical. Please, read them carefully: only your sincere opinion matters)

A. Scenario 1: An agrifood factory has thrown 20,000 liters of whey in a nearby river. Throwing whey into water streams is prohibited by law because it constitutes a source of pollution. Whey causes fermentation of organic matter and a decrease of the dissolved oxygen content of the water, leading to fish mortality, a loss of biodiversity, and unpleasant odors. However, no harm to humans has been found.

The decision to throw the whey has been taken by the company's executive from the company's headquarter located on the production site.

Please indicate the morality of the action committed by this executive on the scale below from 1 (completely moral) to 7 (completely immoral), by clicking on the corresponding number:

1 Completely moral	2	3	4	5	6	7 Completely immoral
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B. Scenario 2: A real estate developer has obtained a legal authorization to deforest a fixed area of forest in an area very well located in terms of real estate valuation. The office of this developer is located in the same area. In order to meet the demand of some customers, this promoter voluntarily and illegally deforested 20 ha more. These 20 ha of forest contained outstanding trees, which were irreversibly destroyed.

Please indicate the morality of the action committed by this developer on the scale below from 1 (completely moral) to 7 (completely immoral), by clicking on the corresponding number:

1 Completely moral	2	3	4	5	6	7 Completely immoral
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C. Please indicate the following information:

1. Age: ____years	4. Your net monthly income:
2. Education: French baccalaureate or less <input type="checkbox"/> Bac + __years <input type="checkbox"/>	a) < 500€ <input type="checkbox"/>
3. Gender: M. <input type="checkbox"/> F. <input type="checkbox"/>	b) Between 500€ and 1 000€ <input type="checkbox"/>
	c) Between 1001€ and 1500€ <input type="checkbox"/>
	d) > 1 500€ <input type="checkbox"/>

Observations:
