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## **Deconfounding Distance Effects in Moral Reasoning**

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#### Abstract

A central question of moral philosophy and moral psychology is whether spatial distance is morally relevant (Kamm, 2007). Does spatial distance reduce our sense of obligation to help strangers in great need? One problem of assessing this question is that distance between agent and victim is typically confounded with other factors, such as saliency of the victim's need, costs for the agent, or location of the agent's means. The goal of our experiments is to find out whether spatial distance per se matters in people's intuitions. Whereas the first two experiments seem to indicate that spatial distance between the agent and the victim or between the agent's means and the victim affect subjects' intuitions, Experiment 3 and a closer look at Experiment 2 both reveal that the assumed distance effects disappear if the compared cases are properly deconfounded. Implications of these findings for theories of psychological distance are discussed.

**Keywords:** moral reasoning; moral intuitions; distance; obligation to help; human experimentation

#### Introduction

The present research aims at exploring the role of spatial distance in moral judgments: Does spatial distance reduce our sense of obligation to help strangers in great need? The normative relevance of this factor has been heavily disputed in philosophy. Thus, we will set out by first reviewing some of the philosophical debate about whether distance ought to matter morally. The aim of this section will not be to contribute to this normative issue, but instead to motivate our empirical investigation and to introduce the thought experiments on which our experimental materials are based. Unlike philosophers we do not want to address the question whether spatial distance ought to matter, but rather aim at finding out whether spatial distance per se is psychologically relevant in moral judgments. Alternatively, distance may only appear to be descriptively relevant due to factors with which it is typically confounded. After a brief discussion of relevant empirical work in psychology, we will report three experiments which explore whether our sense of obligation to help strangers is affected by distance per se. In the concluding section, we briefly discuss the implications of our findings for theories of psychological distance.

#### Distance and the Obligation to Help in Philosophy

In his famous article *Famine, Affluence, and Morality*, the philosopher Singer (1972) argues for an intuitive moral principle: "If it is in our power to prevent something bad from happening, without thereby sacrificing anything of comparable moral importance, we ought, morally, to do it"

(p. 231). In a case example supposed to illustrate this principle, a child is drowning in a shallow pond. Intuitively, a person walking past this pond has a strong obligation to rescue the child, even if this means that she will spoil her clothes. Singer then argues that there is no justification to mitigate this principle on the grounds of increased distance between the victim and the potential agent, for such reasoning would clash with "any principle of impartiality, universalizability, [or] equality" (p. 232). Therefore he believes that we are obligated to help distant strangers as much as physically close strangers, for example by donating a good proportion of our assets to the needy.

The philosopher Unger (1996) agrees with this conclusion, and similarly does not view distance as a normatively relevant factor. For him, physical proximity is merely a factor increasing the conspicuousness of a victim's needs to a potential agent. This conspicuousness, while responsible for our increased urge to help near as opposed to far strangers, is not itself given any moral weight by Unger. He supports this view by contrasting several versions of two cases, The Vintage Sedan and The Envelope. In Sedan, the agent refuses to pick up a man with a self-inflicted injury and to drive him to a hospital, because he fears that the victim's blood will spoil the leather-seating of his car, leading to a \$5000 damage. As a consequence, the victim loses a leg. In Envelope, the agent refuses to respond to a letter from UNICEF which informed him that 30 children could be saved from death if he sent in a check for \$100. As a consequence, 30 more children lose their lives than if the agent had donated the money. According to Unger, our intuitions tell us that the agent's behavior is severely wrong in Sedan, but not so much in Envelope, although there are many features suggesting that the Envelope's behavior is actually much worse (e.g., more victims, each of them suffering a greater loss, smaller costs for the agent, etc.).

To show that the difference in our intuitions between these cases is not primarily grounded in physical proximity, Unger (1996) then discusses both a version of *Sedan* in which physical distance is increased (*The CB Radios*, in which the agent is informed via a radio in his car about the victim's bad condition while he is ten miles away from him), and a version of *Envelope* in which distance is decreased (*The Bungalow Compound*, in which the agent receives the UNICEF mail while he is on holiday, and the children are suffering in his immediate neighborhood). Unger's intuitions (which can in our view be debated) is that we condemn the agent's behavior in *CB Radios* as strongly as in *Sedan*, and that we judge his behavior in the *Bungalow* as leniently as in the *Envelope*. Therefore, our diverging intuitions toward *Sedan* and *Envelope* cannot be accounted

for by the difference of physical distance between agent and victim.

Recently, the philosopher Kamm (2007)<sup>1</sup>, who in contrast to Singer and Unger endorses a nonconsequentialist ethical position, has presented a different view on these matters. Part of her argument against Unger's (1996) claims is as follows: If one wants to show that distance per se never matters morally, it does not suffice to provide a couple of sets of cases in which it does not matter morally, for there might be different equalized contexts in which it does. For example, in both the Envelope and the Bungalow, the children's bad condition is caused by a lack of basic social justice, and it might be that an individual's obligation to help in such cases is not tracked by distance. However, this does not imply that the same holds true for cases involving accidents, for example. On the flipside, Kamm argues, if one wants to show that distance per se does matter morally, it suffices to provide one single set of perfectly equalized cases in which it does. Her approximation of such a set of cases (with the contrast case in parentheses) is as follows:

Near [Far] Alone Case. I am walking past a pond in a foreign country that I am visiting. I alone see many children drowning in it, and I alone can save one of them. [I alone know that in a distant part of a foreign country that I am visiting, many children are drowning, and I alone can save one of them.] To save the one, I must put the \$500 I have in my pocket into a machine that then triggers (via electric current) rescue machinery that will certainly scoop him out. (p. 348)

Kamm's intuition is that she has a stronger obligation to the child in *Near Alone* than to the child in *Far Alone*. As she notes, in this set of cases most of the factors normally confounded with distance are held constant. Among them are, for example, the numbers of victims, the seriousness of their suffering and how it came about. Further factors are the costs for the agent and the way in which they arise, as well as the agent's means of helping and their probability of success. Moreover, the number of potential alternative helpers typically increases with distance. Because all these confounded factors are held constant, Kamm believes that spatial distance alone is responsible for the difference in our sense of moral obligation between *Near Alone* and *Far Alone*.

In summary, the question of whether we *ought to* help needy strangers who are near us more than those who are far is controversial among philosophers. In the current research we are more interested in the question whether spatial distance per se affects intuitive judgments of laypeople if, like in Kamm's cases, potentially confounded variables are controlled. Surely, the intuition that we have a greater responsibility to take care of what is going on near us rather than far from us is shared by most people. But why is this? Is this intuition entirely explainable in terms of distinct, confounded factors like conspicuousness of need, as Unger (1996) claims? Or does distance possess some moral weight of its own in our intuitive judgments, even if all confounding factors are controlled?

Distance and Obligation to Help in Psychology

Before we present our experiments, we want to take a look at previous relevant research in psychology. We are primarily interested in the determinants of moral intuitions rather than in what people actually do. Of course, there is an enormous amount of social psychological studies on determinants of actual (im)moral behavior, some of which also involve investigations of distance effects (e.g., Milgram, 1965). However, such behavior is obviously determined by many more factors than moral judgment alone (e.g., Latané & Darley, 1970).

To our knowledge, only a few studies have directly investigated the influence of distance on people's sense of obligation to help. One study is by Gillis and Hagan (1983), in which participants reported that they were more likely to intervene to prevent criminal behavior if the incident occurred close to their own home as opposed to a distant part of their hometown. In this case, distance refers to the proximity of a threat to the center of an agent's territory, whereas the distance between agent, threat, and victim at the time of the incident is constantly small. Hence, the results indicate that some types of spatial distance may influence people's sense of obligation.

Levine and Thompson (2004) presented a British sample of participants with two scenarios describing the aftermath of a natural disaster. One was about an earthquake in Eastern Europe, the other about a flood in South America. Additionally, the instructions highlighted for half of the participants their British identity, whereas for the other half their identity as Europeans was emphasized. Participants responded to be more likely to offer financial help as well as political engagement if the disaster happened in Europe rather than in America. However, this main effect was qualified by an interaction with the highlighted identity: The difference was greater when the European identity was salient, in which case the comparison between Eastern Europe and South America involved an ingroup/outgroup contrast. For this reason, Levine and Thompson (2004) argue that social categorization of the self relative to the victims rather than absolute geographical distance between them crucially affects whether people feel obligated to help. Note, however, that the distance between agent and victims, while differing in relative terms, is very large in both location conditions. Thus, these results do not rule out that distance effects could be found if the contrast involved one case in which the victim is near the agent in absolute terms and one case in which she is far. As Kamm argues, it might be really spatial proximity or absolute nearness which makes a moral difference, rather than any difference in relative distance.

Finally, Baron and Miller (2000) explored how people deal with the fact that, in principle, they have an unlimited amount of opportunities to help others in great need at little costs to themselves. They considered several factors that people might use to limit the scope of their positive duties, among them spatial distance. They found in both an American and an Indian sample that people find it more

<sup>&</sup>lt;sup>1</sup> All following references to Kamm refer to this volume.

wrong that an agent does not donate bone marrow to a sick patient if this patient lives in the same town as opposed to on the other side of the world. Moreover, significantly more subjects feel that the agent has a responsibility to donate in the near rather than in the far condition. Whereas the contrast in this study contains a genuine difference of proximity between agent and victim, it is again confounded with a difference in shared group membership. In fact, Baron and Miller (2000) themselves explicitly make the ingroup/outgroup contrast accountable for the distance effect they found.

In sum, there is some evidence compatible with the hypothesis that spatial distance might play a role when people consider whether they ought to help needy others. However, there is no previous study that thoroughly deconfounded distance from other factors naturally varying with distance, such as group membership. Moreover, in all studies reviewed so far the distance factor was varied within subjects only. Since people had to compare cases that were otherwise very similar, the salience of the varied factor was probably artificially increased. Thus, demand characteristics may have distorted the results. While the within-subjects component is actually typical for the setting in which philosophers usually form their intuitions (see above), we believe a stronger empirical case for a true influence of spatial distance on laypersons' moral intuitions could be made if effects were found in a properly deconfounded between-subjects design.

#### **Experiment 1**

We take Kamm's Near Alone and Far Alone cases as a starting point for our investigation. As noted above, these cases are equalized in many important respects. Consequently, confounds contained in previous studies can largely be avoided. Moreover, past research (Miller, Bersoff, & Harwood, 1990) has shown that members of different cultures unanimously regard helping strangers in life-threatening situations as a genuine moral obligation rather than as a matter of social convention or personal choice. That is, helping in such cases is considered both as an "objective" duty (i.e., existing not just because of a law) and as legitimately regulated by society. This indicates that most subjects will evaluate the selected cases in moral terms. If a lack of mere spatial proximity between agent and victim decreases people's sense of obligation to help, subjects should judge the agent's obligation in Far Alone to be somewhat lower than in Near Alone. Experiment 1 tests this hypothesis. Note that, since both cases involve an action that is generally considered to be driven by a strong moral duty, a small effect size near the ceiling is to be expected if distance turns out to be relevant.

#### Method

**Participants** 62 Göttingen University students (48 women) with a mean age of 23 years participated voluntarily. The experiment was conducted either in a class room before a

lecture, or subjects were individually approached on campus.

**Design, materials, and procedure** Each participant individually filled out a questionnaire consisting of two pages. The first page contained general instructions explaining the task and asking the participant to try to empathize with the scenario's agent, even though, for methodological reasons, the scenario content would not be realistic. After turning the page, half of the participants (n=31) read a variant of *Near Alone*, the other half (n=31) a variant of *Far Alone*. The wording of both cases was kept as close as possible to Kamm's original formulation (see above), but we decided to include the description of a mechanism by which the agent could possibly have learned about the victims in *Far Alone*. The text of our Near [Far] case was as follows (translated from German):

You are on holiday in a foreign country. There, you take a walk past a pond. You alone see many children drowning in it [While you take a walk there, you alone learn via an information service on your cell phone that many children are drowning in a pond situated in a distant part of the country], and you alone can save one of them. To save the one, you must put the  $\[mathebox{\ensuremath{\mathfrak{e}}}\]$ 500 you have in your pocket into a machine that accidentally is situated right next to you. This machine then triggers a remote-controlled rescue machine in the pond which will definitely pull one of the children out of the water and save her life. There is no other possibility to save one or more of the children.

This case description was followed by an assessment of the participants' sense of obligation to help. The wording of the question was: "How strongly do you feel obligated to put your €500 into the machine in order to save one of the children?," highlighting both consequences and costs of the action. Finally, participants were asked to indicate their judgment on a 6-point rating scale, labeled "not at all" at the left-hand end (1) and "very strongly" at the right-hand end (6).

#### **Results**

The mean rating for sense of obligation was 5.61 (SD=.67) in the Near condition, and 4.97 (SD=1.22) in the Far condition. This difference was statistically significant ( $t[df_{corr}$ =46.37]=2.58, one-tailed, p<.01, d=.65).

#### **Discussion**

Our participants seem to share Kamm's intuitions regarding the *Near Alone* and *Far Alone* cases. Even though, as expected, ratings were very high in both conditions, participants reported a higher sense of obligation to rescue a child drowning near them rather than far from them. This effect cannot be accounted for by most confounds usually associated with spatial distance, such as social distance, number of potential saviors, urgency, probability of success, or type, and size of costs for the agent.

<sup>&</sup>lt;sup>2</sup> In none of the experiments there was a significant effect of sex on sense of obligation to help. Therefore, this factor is excluded from all analyses.

This result encouraged us to test further factors proposed by Kamm. In particular, an important claim she makes is that not only proximity between agent and victim might be of moral importance, but also proximity between the victim and the agent's items that are efficacious in helping the victim. In other words, Kamm's intuition is that an agent is more strongly obligated to let his means be used if they are situated near the victim rather than if they are far, even if he is far from the victim himself in both cases. As an example she uses drowning scenarios in which the distance between agent and victim is kept constantly high, but the distance of the means of saving, a boat the agent owns, is either near or far the victim. Kamm's intuition is that this distance is morally relevant.

### **Experiment 2**

In Experiment 2 we seek to test the hypothesis that proximity between an agent's means and the victim increases the agent's sense of obligation to help, even if the agent himself is constantly far away from the victim. We construed a scenario in which an agent has the opportunity to donate money in order to save sick children in Kenya from early death. His means to this end is money on a bank account which is either located close to him but far from the victims (in Göttingen, Germany) or close to the victims (in Kenya). Additionally, we anticipated that subjects might infer that they are in some way involved with Kenya from the fact that their money is there already. To control for this obvious confound, we decided to include previous personal involvement with Kenya as an additional independent variable.

#### Method

**Participants** 80 Göttingen University students (48 women) with a mean age of 24 years participated voluntarily after being approached individually on campus.

**Design, materials, and procedure** The two independent variables yielded a 2 (distance between victim and agent's means: Near vs. Far)  $\times$  2 (involvement: High vs. Low) between-subjects design (each n=20). The questionnaires had the same format as in Experiment 1. The case vignette in the Near/High [Near/Low] condition read as follows (translated from German):

A couple of years ago, you have opened a bank account in Kenya while you spent your holidays there [because you found out about the high interest rates there]. Since then, you have returned there a couple of times. This is why you are still maintaining this account today. [Since this proved of value, you are still maintaining this account today. Neither have you ever been to Kenya yourself, nor have you had any other connection to that country.]

One day, while you are in Göttingen, you hear in the news that several children in Kenya have been infected with a rapidly progressing disease. If these children do not receive medical treatment, they will die within the next few days. However, there is a lack of money for the urgently needed treatment. You could effectively contribute to saving the children by transferring €30 via internet from your Kenyan bank account to a local donation account.

The respective Far conditions were identical, except that the agent's bank account was located in Göttingen. Sense of obligation was assessed using the same scale as in Experiment 1. The wording of the question was: "How strongly do you feel obligated to perform the proposed action?"

#### Results

The results are summarized in Figure 1. A two-way ANOVA revealed a main effect of involvement on sense of obligation to help (F[1,76]=11.25; p<.01;  $\eta_p^2=.13$ ), indicating that stronger previous involvement with Kenya led participants to report that they feel more strongly obligated to donate the money. Moreover, there was a main effect of distance (F[1,76]=4.31; p<.05;  $\eta_p^2=.05$ ), showing that participants reported feeling more strongly obligated to help if their bank account was in Kenya. The interaction between both independent variables was not significant (F[1,76]=1.25; p=.27).

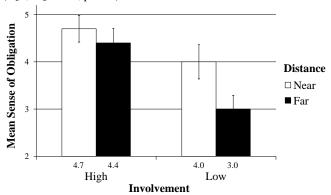


Figure 1: Mean ratings of sense of obligation in Experiment 2. Error bars indicate SEM.

#### **Discussion**

As expected, previous personal involvement with the home country of the children in need heavily increased respondents' sense of obligation to help. More interestingly, we found an independent effect of the location of the bank account: Participants felt more obligated to help if the means by which they could do so were already located close to the victims, even in the case in which the agent had never visited the country and only had opened an account because of the favorable interest rate. The effect of the spatial distance of the means is especially interesting since the action required to help (i.e., instructing a transfer of funds via internet) is virtually identical in both conditions. Moreover, the location of the means is actually merely symbolic in this scenario, since the agent's money does not have real physical presence either in Kenya or in Göttingen prior to being withdrawn from a cash machine. Still, it seems that even under these conditions participants share Kamm's intuition that proximity of means increases obligation to help.

So far, Kamm's propositions about the impact of mere spatial distance on moral intuitions are mirrored in our

participants' judgments in both experiments. However, despite all the effort invested in making the cases maximally parallel, both experiments still contain remaining confounds. In particular, it cannot be ruled out that in the Near/Low condition in Experiment 2, the knowledge that the agent is somehow profiting from the Kenyan financial system is the source of increased obligation, even if all other personal involvement is explicitly ruled out. In fact, in informal discussions with participants who had completed this condition, quite a few of them spontaneously mentioned that such considerations had influenced their judgment. Moreover, even in the more tightly controlled and therefore more artificial cases of Experiment 1 there is a remaining potentially relevant confound (see also Kamm): In the Near case, the agent directly sees the drowning children with her own eyes, whereas in the Far case the information is mediated by an electronic device. Therefore, in Experiment 3, apart from trying to replicate the results from Experiment 1, we aim to go one step further and try to experimentally control for informational directness in order to find out whether an independent effect of spatial distance can still be found.

## **Experiment 3**

Experiment 3 aims at replicating the results of Experiment 1 while controlling for the previously confounded factor of informational directness. Additionally, we seek to find out whether a distance effect can be found if there are no considerable costs to the agent. Kamm's intuition is that distance does not matter under such conditions of no cost: If all I need to do to save someone's life is to pull a switch, I ought to do so regardless of whether the victim is near me or not.

#### Method

Participants 240 Göttingen University students (133 women) with a mean age of 24 years participated voluntarily after being approached individually on campus. Design, materials, and procedure We orthogonally manipulated three independent variables, yielding a 2 (distance between agent and victim: Near vs. Far) × 2 (informational directness: Direct vs. Mediated) × 2 (costs: Zero vs. High) between-subjects design (each n=30). The case vignettes were closely matched to Near and Far in Experiment 1, but to control for informational directness we made some changes. To be able to construe a case in which the agent has direct information despite large physical distance (by means of binoculars), we decided to move the victims somewhat closer to the agent, so that now the distance was about five kilometers in all Far conditions. In all Mediated cases, the information was again transmitted via cell phone in the form of a video (to keep the visual modality constant). In the Near/Mediated conditions, there was a high wall between agent and victims to avoid direct visual contact. Moreover, the pond was replaced by a thunderous river in all conditions to prevent participants in this condition from assuming that the agent could hear the children screaming. In Near/Direct, we included a fence instead of a wall to make sure that participants in this condition would not believe the agent could simply jump into the river. Finally, in all Zero cost conditions, the action no longer consisted of putting money (in the costly case €300, being closer to Kamm's \$500 in terms of actual worth) into the machine, but rather of pulling a switch. Sense of obligation was assessed using the same scale and wording of question as in Experiment 2.

#### Results

The results are summarized in Figure 2. In order to test whether the results of Experiment 1 could be replicated, we first conducted a planned contrast between the conditions Near/Direct/High and Far/Mediated/High, which correspond to Near and Far in Experiment 1. This contrast was significant (t[232]=2.41, one-tailed, p<.01, d=.62)<sup>3</sup> and the respective means were almost identical with those obtained in Experiment 1, thus neatly replicating its results.

Afterwards, we conducted a three-way ANOVA which revealed a main effect of costs on sense of obligation to help  $(F[1,232]=15.77; p<.001, \eta_p^2=.06)$ , indicating that participants reported feeling more strongly obligated to help at zero costs than at high costs. Moreover, there was a main effect of informational directness  $(F[1,232]=4.53; p<.05; \eta_p^2=.02)$ , showing that participants reported feeling more strongly obligated to help if they witnessed the incident with their own eyes. Crucially, there was no main effect of distance (F[1,232]<1), nor were any of the interactions between the three independent variables statistically significant.

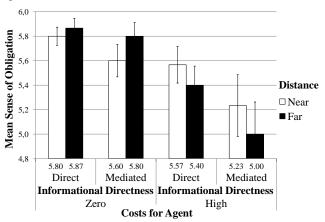


Figure 2: Mean ratings of sense of obligation in Experiment 3. Error bars indicate SEM.

#### **Discussion**

The findings from this experiment indicate that the assumed distance effect from Experiment 1 can be attributed to an effect of informational directness. If directness is kept constant, distance does not have an effect anymore. The fact

<sup>&</sup>lt;sup>3</sup> This difference remains significant if the t-test is based exclusively on the two compared groups and corrected for their unequal variances (t[df<sub>corr</sub>=45.95]=1.88, one-tailed, p<.05, d=.48).

that we were able to exactly replicate the mean ratings of Experiment 1 in the corresponding conditions of Experiment 3 makes it seem unlikely that any of the small changes we introduced to the material (e.g., slightly lower costs, videomediated information, more abstract question wording) is responsible for the absence of a distance effect. Thus, we are confident that informational directness also caused the effect in Experiment 1.

The strongest effect we found was that our subjects' sense of obligation to help was lowered when there were substantial costs for the agent. None of our subjects may have actually believed that a child's life is not worth \$300. Rather, some of them may have felt that a shady machine taking \$300 to rescue a child is itself immoral. More interestingly, we did not find an interaction of costs and distance, as Kamm would have predicted. Distance indeed did not affect the ratings when there weren't any costs for the agent, but neither did it when there were.

#### **General Discussion**

Kamm supports her claim that distance per se matters morally with her intuitions regarding her sense of obligation to help needy strangers in well equalized scenarios. Experiment 1 showed that laypersons share her intuitions on one of her central set of cases. Experiment 2 indicated, as Kamm has proposed, that not only distance between agent and victim, but also distance between an agent's means and the victim may affect our moral intuitions. It seems likely, though, that distance effects here were mediated by assumptions about different amounts of responsibility. The interpretation that distance effects may be generally reducible to other confounded factors is bolstered by Experiment 3, which additionally controlled for informational directness. This experiment revealed that the assumed distance effect from Experiment 1 disappears if the compared cases are properly deconfounded. Thus, while we find that our participants' responses to specific cases are largely in line with Kamm's intuitions, we also find, contrary to what Kamm argues, that these intuitions are informed by factors typically confounded with distance rather than by distance per se. In this sense, our data are more in line with Unger's (1996) behavioral predictions. Moreover, they align nicely with recent findings by Greene et al. (2009) who did not find spatial distance to influence judgments of moral dilemmas when this factor was carefully separated from related factors such as personal force or physical contact.

This pattern of results indicates that a purely spatial notion of distance does not seem to affect moral judgment of laypersons. That, of course, is not to say that what is commonly experienced as spatial distance in everyday life does not influence people's moral judgments. In fact, as Experiment 2 has shown, in naturalistic settings, people are sensitive even to very subtle manipulations of distance. However, psychologically relevant distance seems to be a broad concept naturally enriched with many covariates, such as informational directness or personal involvement. The

difficulty of isolating spatial distance from its typically associated dimensions becomes evident in the highly artificial scenarios that result from our attempts to hold the confounded variables constant.

Future research could aim at investigating psychological mediators of effects of (enriched) distance. Previous studies in the framework of Construal Level Theory (CLT) have demonstrated the impact of psychological distance on the intensity of moral judgments (Eyal, Liberman, & Trope, 2008). The present findings constitute an interesting anomaly from the perspective of CLT, which predicts the impact of abstract, high-level moral values (such as "it is good to help others in need") on the intensity of moral judgment to increase with increasing psychological distance. While this seems to be true for temporal distance (Eyal et al., 2008), our results indicate that sense of obligation is not affected by spatial distance per se, and that it, if anything, decreases with increasing enriched distance. This might indicate that, at least in the realm of morality, the processes through which different distance dimensions operate are not as similar as CLT commonly assumes.

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