



FlashReport

Going my way? The benefits of travelling in the same direction

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ABSTRACT

Couples' marital satisfaction can depend on whether they commute to work in the same or different directions. Two surveys, conducted in the United States and Hong Kong, showed that partners' satisfaction with their relationship was greater when they traveled to work in the same direction than when they traveled in different directions. This was true regardless of whether the partners left for work at the same or different times. A controlled laboratory study eliminated alternative interpretations of the survey findings, showing that even randomly paired participants reported greater attraction to one another when they walked to an experimental task in the same direction rather than in different directions.

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“Love does not consist in gazing at each other but looking in the same direction together.”

–Antoine de Saint-Exupéry

Introduction

Suppose a newlywed couple is choosing their apartment. One apartment is midway between their work places. A second is directly east of both partners' work places, so they would commute in the same direction but one partner would take longer to get to work than the other. Which apartment should they choose? If they choose the first option, their combined commuting distance would be shorter. Furthermore, they would share the burden of commuting equally. Nevertheless, our research suggests that the second option may be preferable. That is, mere similarity in the direction of commuting to work increases marital satisfaction.

What could account for this effect? Although similarity in goals and values has a positive influence on the quality of interpersonal relations (Byrne, Clore, & Smeaton, 1986; Byrne, Griffitt, & Stefaniak, 1967; Hendrick, 1981; Locke & Horowitz, 1990), this evidence might seem to be of little relevance to the phenomena we investigated. According to Barsalou (2008) and others (IJzerman & Koole, 2011; Landau, Meier, & Keefer, 2010), however, individuals form mental representations whose features include both behavioral dispositions and concepts to which the behavior is metaphorically linked. Thus, physically moving in a particular goal-relevant direction (e.g., commuting

to work) might become associated with more general goal-related concepts. Evidence of this association was reported by Natanzon and Ferguson (2012).

It therefore seems reasonable to suppose that associations can also be formed between the *similarity* of goal-directed behavior and the similarity of goals to which the behavior is metaphorically linked. (The use of phrases such as “going our separate ways” to describe individuals' opposing objectives exemplifies this metaphorical association.) That is, physically moving in the same or a different direction in the course of goal-related activity might be a feature of a mental representation that also contains concepts pertaining to the pursuit of similar or different goals in general. If this is so, and if these concepts provide the basis of marital happiness (Avivi, Laurenceau, & Carver, 2009; Hendrick, 1981), frequently engaging in behavior that activates the concepts (i.e., travelling in the same or a different direction to work) could increase the chronic accessibility of these concepts in memory (Bargh, Bond, Lombardi, & Tota, 1986) and, therefore, could increase estimates of marital satisfaction that are based on the concepts.

Two field surveys, each in a different country, provided converging evidence of this *shared-direction* effect. In addition, a controlled laboratory study showed analogous effects of “commuting” direction on the interpersonal attraction of randomly paired partners, thereby ruling out several alternative explanations of the field studies.

Study 1: working couples in the United States

Method

Two hundred eighty participants from the United States (135 males) participated in an online survey. They averaged 33 years of age and had been married an average of 7.7 years. Participants were

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selected if (a) they were currently married, (b) both they and their spouse currently had jobs and (c) neither partner worked at home. They were told that the survey was concerned with the living conditions of married couples. On this pretense, participants first answered two questions, “To what extent are you happy with your marriage” and “To what extent are you satisfied with your spouse?” along a scale from 1 (not at all) to 9 (very). Responses to these items were correlated .89 ($p < .001$), and were averaged.

Participants were then given a diagram with eight arrows (North, Northeast, East, Southeast, etc.) extending from a central point (i.e., home) and were asked to indicate the distance from home to both their own and their partner's work place. Participants then estimated both their own and their spouse's commuting times and indicated whether they and their spouse sometimes left for work together or never did. Finally, demographic questions (i.e. number of years married, yearly income, number of children, gender, and age) were recorded.

Results

To obtain an indication of the directional similarity of partners' commuting behavior, we determined the angle between each partner's estimate of the direction in which he or she traveled to work and the direction the partner travelled. This angle was coded 1, .75, .50, .25 or 0, depending on whether it was 0, 45, 90, 135 or 180 degrees. As shown in Table 1, this index was correlated .20 ($p = .001$) with marital satisfaction. Partial correlational analyses indicated that this correlation was independent of the number of years married, the number of children, income, gender, and between-partner differences in commuting time (a proxy for differences in commuting distance). Moreover, the correlation did not depend on whether partners sometimes left for work together ($r = .22$, $p = .07$, $N = 72$) or never did ($r = .16$, $p = .02$, $N = 208$). These two correlations were not significantly different ($p = .65$). Thus, our findings could not be attributed to differences in the likelihood of partners' interacting with one another on the way to work.

Study 2: working couples in Hong Kong

Method

Study 2 replicated the findings of Study 1 in a different cultural setting. Participants were 139 married adults in Hong Kong (51 males) who took the metro (subway) to work. They averaged 42 years in age and had been married for an average of 13.4 years. Participants were approached on the street and asked if they would answer a few questions about the living conditions of working couples. First, they reported their satisfaction with their marriage along the same scales used in Study 1. After doing so, they were given a standard map of the metro routes in Hong Kong and indicated the locations of the metro stations nearest their home, their work place, and their partner's work place. They traced both their own and their spouse's commuting route on the map. Finally, they estimated their

commuting time, indicated how often they and their spouse left for work together (either “sometimes” or “not at all”), and provided demographic information similar to that collected in Study 1.

Results

We assessed two alternative characteristics of participants' commuting behavior. To evaluate similarity in commuting direction, we identified the locations of participants' home, their own workplace, and their partners' workplace on a city map and coded similarity in the manner employed in Study 1. In addition, we inferred the similarity in partners' route from the proportion of the participant's metro stops that were common to the stops made on the route taken by the partner. This index was correlated .70 ($p < .001$) with the index of shared direction.

The relation of similarity in direction to marital satisfaction was consistent with that observed in the first study, as shown in Table 1. Specifically, direction similarity was correlated .35 ($p < .001$) with marital satisfaction, controlling for number of years married, number of children, gender, income, and between-partner differences in commuting time. This was true regardless of whether partners sometimes left for work together ($r = .42$, $N = 60$, $p = .001$) or never did ($r = .25$, $N = 79$, $p = .036$). The index of similarity in route was also positively correlated with marital satisfaction ($r = .37$, $p < .001$), and this was also true regardless of whether participants sometimes left for work together ($r = .28$, $N = 60$, $p = .039$) or never did ($r = .36$, $N = 79$, $p = .002$).

Discussion

Although the two surveys provided converging evidence of the shared-direction effect, we could not rule out the possible effects of other determinants of marital satisfaction that are correlated with similarity in commuting direction. For example, couples who travel in the same direction might be more likely to meet after work for dinner or entertainment. Furthermore, jobs that are located in the same area of a city may be more similar to one another than jobs in different areas. Moreover, if workplaces are typically in the city center, similarity in commuting direction might be more typical of couples who live in the suburbs than of couples who live in the inner city. To offset these and other potentially confounding factors, we conducted a controlled laboratory experiment in which these factors did not come into play.

Study 3: laboratory experiment

Method

Eighty Hong Kong undergraduate students (40 males) participated for pay of approximately US\$5. Participants were run in opposite sex pairs and were unacquainted prior to the experiment. They were assigned to conditions of a 2 (direction: same vs. different) \times 2 (route: same vs. different) between-subjects design.

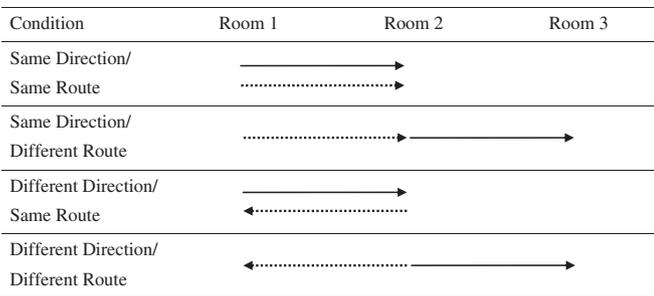
Participants were instructed that they would be working with one another in a discussion of how to improve university services, but that before doing so, they would participate in an unrelated study of how physical exercise influences product evaluations. On this pretense, participants were asked to perform a “walking and lifting weights” task. The experimenter then left the room for 5 minutes to set up the equipment, thereby allowing the two participants to become briefly acquainted. Upon returning, the experimenter indicated that participants would perform 10 trials of an exercise that involved both walking and lifting weights. They were told that to avoid interfering with one another, each partner would perform the exercises in a different room, and that they would each walk to their room,

Table 1
Correlations between marital satisfaction and commuting direction similarity and commuting route similarity—studies 1 and 2.

	Shared direction			Shared routes		
	Total	Never depart together	Sometimes depart together	Total	Never depart together	Sometimes depart together
United States	.20***	.16**	.22*	–	–	–
Hong Kong	.35***	.25**	.42***	.37***	.36***	.28**

Note. * $p < .10$; ** $p < .05$, *** $p < .01$.

Illustration of the Four Conditions Employed in Study 3.



Note. Solid and dotted arrows denote the direction walked by partners A and B, respectively.

Fig. 1. Illustration of the four conditions employed in Study 3.

lift a dumbbell 5 times and then return, repeating the exercise 10 times.

Four different conditions were constructed, shown schematically in Fig. 1. In *same-direction/same-route* conditions, the two rooms were the same distance (about 4.5 m) from the starting point but next to one another. In *same-direction/different-route* conditions, participants walked in the same direction and equal distances, but started from different places along the same corridor. In *different-direction/same-route* conditions, each participant's starting point was the other participant's work place. Thus, they walked in opposite directions but shared the same route. In *different-direction/different-route* conditions, the two exercise locations were each about the same distance from the starting point and in opposite directions.

After completing the exercise task, participants indicated the extent to which they were (a) happy with their partner and (b) satisfied with their partner along scales from 1 (not at all) to 9 (very). Responses to these items were correlated ($r = .95, p < .001$) and were averaged. Then, participants predicted how much they would enjoy participating in the forthcoming discussion along a similar scale. After that, participants proceeded to the product evaluation task and discussed how to improve university service (data from these two tasks were not scored).

Results

Participants' evaluations of their partner and their expected enjoyment of the interaction task are shown in the top half of Table 2. As partners were run in opposite sex pairs, we first averaged the responses over the two partners, and then conducted analyses of these evaluations as a function of direction similarity and route similarity, treating pairs as the unit of analysis. The results yielded only a significant main effect of direction similarity ($F(1, 36) = 7.09, p = .012, \eta^2 = .16$). Participants were more satisfied with their partner when

Table 2
Partner evaluations and expected task enjoyment as a function of direction similarity and route similarity—study 3.

	Same direction	Different direction
Partner evaluation		
Same route	7.48 ^a	6.69 ^{b,c}
Different route	7.14 ^{a,c}	6.20 ^b
Expected task enjoyment		
Same route	6.77 ^a	5.94 ^{b,c}
Different route	6.22 ^{a,c}	5.32 ^b

Note. Cells with unlike superscripts differ at $p < .05$, one-tailed.

they had walked in the same direction ($M = 7.31, SD = .72$) than when they had walked in different directions ($M = 6.46, SD = 1.14$), and this was true regardless of whether they had taken the same route (7.45 vs. 6.67, respectively) or different ones (7.14 vs. 6.30, respectively). However, although participants generally evaluated their partner more favorably when they had taken the same route ($M = 7.10, SD = .99$) than when they had taken different ones ($M = 6.68, SD = 1.06$), this difference was not significant ($F(1, 36) = 1.26, p = .270, \eta^2 = .03$).

Analyses of expected task enjoyment, summarized in the bottom half of Table 2, yielded similar conclusions. The main effect of directional similarity was significant ($F(1, 36) = 8.70, p = .006, \eta^2 = .20$), and indicated that participants expected the task to be more enjoyable when they had walked in the same direction ($M = 6.59, SD = .91$) than when they had walked in different directions ($M = 5.55, SD = 1.17$) and this was true regardless whether they had taken the same route (6.86 vs. 5.78, respectively) or different ones (6.22 vs. 5.36, respectively). Participants expected to enjoy the task more when they had taken the same route ($M = 6.38, SD = .86$) than when they had taken different routes ($M = 5.75, SD = 1.34$). However, this difference was not significant ($F(1,36) = 2.57, p = .118, \eta^2 = .07$).

Thus, this experiment provided further support for the shared-direction effect while eliminating a number of alternative interpretations that might be given to the survey findings. In contrast, the effect of taking the same route on interpersonal attraction was small and nonsignificant.

General discussion

Similarity in not only goals and values, but also in attributes and behavior that are objectively irrelevant to individuals' personal qualities (e.g., shared birthdays), can have an impact on interpersonal attraction (Burger, Messian, Patel, del Prado, & Anderson, 2004; Jiang, Hoegg, Dahl, & Chattopadhyay, 2010). Incidental similarities in behavior can also have an influence (Chartrand & Bargh, 1999; Paladino, Mazzurega, Pavani, & Schubert, 2010). However, the effect of travelling direction on interpersonal attraction provides new insights into the nature of these effects.

The conceptualization underlying our research was stimulated by theory and research on grounded cognition (Barsalou, 2008). That is, we assumed that engaging in goal-directed behavior (e.g., commuting to work, or walking to an experiment) can activate a mental representation that includes more general concepts of goal-directed activity (i.e., the pursuit of goals more generally; see Natanzon & Ferguson, 2012). Correspondingly, similarity in the direction of goal-directed behavior activates concepts of the similarity of the goals being pursued. This, in turn, increases interpersonal attraction for reasons similar to those postulated by Byrne et al. (1967, 1986) and reported in research on marital satisfaction (Hendrick, 1981).

The shared-direction effect was evident in near strangers (Study 3) as well as in marriage partners (Studies 1 and 2). In some cases, however, a pair of strangers or a pair of heterosexual people of the same gender might also exhibit the effect. It is important to keep in mind that the effect should theoretically occur only under conditions in which commonality of goals is a relevant basis of interpersonal attraction. Subject to this constraint, the effect might even be more general than our present research indicates.

More general implications of our results are worth noting. Past research on the effects of grounded cognition has normally been restricted to a consideration of immediate reactions to body sensations such as carrying a heavy weight (Jostmann, Lakens, & Schubert, 2009; Zhang & Li, 2012) and moving up or down (Sanna, Chang, Miceli, & Lundberg, 2011). However, our work shows that the influence of embodiment can be much more enduring. Knowledge accessibility research (Förster & Liberman, 2007; Higgins, 1996; Wyer, 2004, 2008)

indicates that the frequency with which concepts have been activated in the past increases their chronic accessibility in memory and, therefore, the likelihood of using it as a basis for judgment. The implications of this possibility may warrant further examination in other embodied cognition research.

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