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#### **Original Article**

### Commitment signals in friendship and romantic relationships

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#### ABSTRACT

Due to the ever-present allure of potentially more appealing or attractive partners, people in mutually committed relationships face a commitment problem (i.e., uncertainty about partner fidelity). This problem exists for both friendship and romantic relationships. In an exploratory pilot study, participants described real-life commitment-confirming incidents in either friendship or romantic relationships. The results revealed that the same types of pro-relationship acts (e.g., throwing a surprise party) were used to communicate commitment to one's partner in both types of relationship. Using signaling theory, we predicted that costly commitment signals would be more effective than non-costly commitment signals (Hypothesis 1). Also, we predicted that failure to engage in such behaviors would communicate non-commitment, and that such failures would have a more detrimental effect on romantic relationships than friendship (Hypothesis 2). Two scenario experiments (study 1 in Japan and study 2 in the U.S.) were conducted to test these hypotheses. The results showed that costly commitment signals were more effective than non-costly commitment signals in both Japan and the U.S. In addition, the absence of situationally appropriate commitment signals (e.g., forgetting a special occasion) was substantially more damaging to romantic relationships than to friendship.

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#### 1. Introduction

Friendship and romantic relationships (i.e., two types of close nonkin relationships) are associated with a catalog of benefits ranging from increases in self-reported well-being and happiness to improvements in the immune system functioning, lower rates of cardiovascular disease, and reduced mortality (Argyle, 1987; Cacioppo & Patrick, 2008; Holt-Lunstad, Smith, & Layton, 2010; House, Landis, & Umberson, 1988; Jaremka, Derry, & Kiecolt-Glaser, 2014; Myers & Diener, 1995). Despite these beneficial effects, the effective maintenance of friendship and romantic relationships poses a difficult adaptive problem, the so-called commitment problem (Frank, 1988; Nesse, 2001; Schelling, 1960). Suppose that Jessie and Jordan are in a close relationship (gender neutral names are used to emphasize similarities between friendship and romantic relationships). When Jessie encounters a more appealing or attractive relationship partner, Jessie might desert Jordan. The same holds for Jordan. Problematically, the presence of this doubt may deter Jessie and Jordan from deepening their existing relationship. Therefore, in order to maintain a close relationship and to reap benefits from it, both parties must be able to (1) effectively commit themselves to their current partner and (2) credibly communicate this commitment.

Frank (1988) pointed out that certain emotions can help solve the first half of the commitment problem (i.e., the problem of steadfastly committing to one's partner). Love, for example, functions as a commitment device that promotes long-term commitment and, at times, what

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appears to be irrational devotion (Campbell & Ellis, 2005). Those who are in love tend to devalue attractive potential partners by, for example, paying less attention to them and/or perceiving them as less attractive than they actually are (Gonzaga, Haselton, Smurda, Davies, & Poore, 2008; Johnson & Rusbult, 1989; Lydon, Meana, Sepinwall, Richards, & Mayman, 1999; Maner, Gailliot, & Miller, 2009; Miller, 1997; Simpson, Gangestad, & Lerma, 1990). Other emotions, such as gratitude and guilt, may also serve as a commitment device (Frank, 1988; Trivers, 1971).

Solving the second half of the commitment problem (i.e., genuinely communicating one's commitment) is more difficult than it might first appear. This is because talk is cheap (Farrell, 1987): Jessie's swearing "best friends forever" or "till death do us part" does not warrant that Jessie will stay in the relationship with Jordan when another more appealing person becomes interested in Jessie. Frank (1988) maintained that the key to solve this second problem lays in emotional expressions that are "hard-to-fake." Romantic love, for example, is associated with an array of hard-to-fake expressions, such as the Duchenne smile and unconscious gesticulation (Gonzaga, Keltner, Londahl, & Smith, 2001; Gonzaga, Turner, Keltner, Campos, & Altemus, 2006). Nevertheless, other types of commitment signals have not been well studied. To counteract this imbalance, the present study investigates how commitment to one's friend or romantic partner can be credibly communicated via pro-relationship commitment signaling behaviors.

#### 1.1. Costly commitment signals

Emotional expressions may not be the only way to communicate commitment. According to the costly signaling theory (CST; Grafen, 1990; Zahavi & Zahavi, 1997), the costliness of producing a signal

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reveals information about the honesty of the signal. Recently, CST has been successfully applied to interpersonal processes, such as trust recovery and reconciliation (Ohtsubo & Watanabe, 2009; Ohtsubo & Yagi, 2015). The logic of CST in the context of commitment is as follows: When Jordan uses his/her resource (e.g., money, time) to maintain a relationship with Jessie (e.g., purchasing a birthday present for Jessie), Jordan has to relinquish other activities/opportunities that the same resource would afford (e.g., purchasing a gift for someone else). The greater the cost that Jordan incurs, the more activities/opportunities Jordan has to give up. Therefore, costly pro-relationship behaviors honestly signal how strongly Jordan commits to the relationship with Jessie. Previous research suggests that the following three types of commitment related behavior may be classified as costly signals. <sup>1</sup>

#### 1.1.1. Gift giving

Game theoretic analyses have shown that a particular kind of gift may serve as an effective commitment signal (Bolle, 2001; Camerer, 1988; Sozou & Seymour, 2005). The gift must not be too valuable to the recipient, lest the gift-giver become vulnerable to exploitation (e.g., by "gold diggers"). Yet the gift must be costly to the gift-giver, lest it cease to function as a signal. Thus, the best kind of gift for signaling commitment is one that is extravagant yet intrinsically worthless (e.g., a dozen long stem red roses). In support of this main prediction, a scenario experiment by Robben and Verhallen (1994) revealed that recipients find the same gift more preferable when a gift-giver incurs time and physical/psychological costs in obtaining it (see also Algoe, Haidt, & Gable, 2008, for the relationship-promoting effect of personalized, as opposed to impersonal, gifts in sororities).

#### 1.1.2. Self-sacrifice

Forgoing one's "immediate self-interest to promote the well-being of a partner or relationship" (Van Lange et al., 1997, p. 1374) may also qualify as an effective commitment signal. Defined as such (i.e., including the promotion of the partner's well-being), however, self-sacrifice may be thought of as conceptually equivalent to giving an intrinsically valuable gift. Accordingly, self-sacrifice may appear to be an insufficient communicative medium because signalers (i.e., those who are prone to make great sacrifices for their relationship partner) are vulnerable to freeloaders who could unilaterally benefit from their committed partners' sacrifices without returning any favors (Sozou & Seymour, 2005). Nonetheless, several lines of evidence support the idea that self-sacrifice serves as a valid commitment signal: Those who are committed to their romantic partners are more willing to undergo sacrifices, such as donating a kidney for their partner (Powell & Van Vugt, 2003); recipients of sacrifices perceive their partners to be more committed (Ohtsubo & Murakami, unpublished data); and the amount of sacrifices within a romantic relationship predicts long-term relationship functioning (Stanley, Whitton, Sadberry, Clements, & Markman, 2006; Van Lange et al., 1997).

#### 1.1.3. Stress tolerance

Commitment may also be communicated by tolerating a stress imposed by one's partner (Kelley, 1983; Zahavi, 1977). Zahavi argued that the strength of a bond can be tested by inflicting some stress on one's partner: If the partner is truly interested in the relationship, the partner should sustain the stress. In this way, the tested individuals are forced to reveal their commitment to the relationship. Although this idea has not yet been directly examined among humans (see Maestripieri, 2012; Perry, 2011, for evidence in non-human primates), there is some supportive evidence. For example, people are

more forgiving of transgressions inflicted by their close partners than distant others (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Karremans et al., 2011).

The notion of stress tolerance differs from commitment signals via gifts/self-sacrifices in terms of who moves first. For commitment signals, the signaler moves first, while for stress tolerance, the signal recipient moves first by inflicting some stress on the potential signaler. Despite this difference, these two cases are game-theoretically equivalent, as both can be subsumed under the rubric of signaling game (Rasmusen, 2007). In addition, in real life contexts, it may be nebulous whether the partner voluntarily acted in a pro-relationship manner or the recipient implicitly required the partner to do so. Therefore, in the present research, we do not make a distinction between spontaneous vs. solicited behaviors that signal commitment.

#### 1.2. The effectiveness of non-costly commitment signals

The above arguments have emphasized the role of cost, either financial or physical, when communicating commitment to one's partner. However, every commitment signal does not necessarily involve financial or physical cost. Considerate statements based on consistent social attention, for example, might credibly communicate commitment (Dunbar & Shultz, 2010; Ohtsubo et al., 2014). Imagine a scenario where Jordan has been exhibiting some signs of depression. If Jessie has been paying attention to Jordan, Jessie is able to note Jordan's problem and respond in a considerate manner by making statements such as, "I noticed you've been feeling down lately." It is noteworthy that Jessie must allocate a certain amount of attention, a cognitive resource, to Jordan in order to make contextually appropriate remarks (see Sutcliffe, Dunbar, Binder, & Arrow, 2012, for a similar argument in the context of time allocation in social networks). Because the capacity for attention is limited, paying attention to Jordan entails some opportunity cost, such as being less able to pay attention to other potential partners. Therefore, pro-relationship behaviors that entail little production cost (e.g., verbal assurances) may serve as commitment signals. Nonetheless, it is still expected that financially or physically costly forms of pro-relationship behaviors will, on average, have a stronger commitment confirming effect than (relatively) non-costly ones.

**Hypothesis 1.** Costly commitment signals are more effective to communicate one's commitment to the relationship than non-costly commitment signals.

#### 1.3. Symmetry and asymmetry of friendship and romantic relationships

It is important to note that as the commitment problem pertains to any type of intimate relationship, all of the above arguments readily apply to both friendship and romantic relationships. Therefore, a corollary from the above arguments is as follows: Similar pro-relationship behaviors should serve to confirm the presence or absence of commitment in both friendship and romantic relationships. If we ask people to describe events that have confirmed the presence of commitment in their friends or romantic partners, they ought to report similar events.

**Corollary.** Commitment confirming narratives in friendship and romantic relationships include similar pro-relationship behaviors.

Despite this similarity, strong commitment might be more important in romantic relationships than in friendship. First, while people usually maintain simultaneous friendships with multiple allies, the simultaneous maintenance of multiple romantic relationships, especially in the context of long-term mating, is rare (a possible exception is high-ranking individuals in polygynous societies). Second, there is some evidence that romantic relationships are given priority over friendship. For example, developing a romantic relationship is one of the major causes of friendship dissolution (Rose, 1984). People in later stages of romantic relationships (e.g., engaged couples) tend to interact

<sup>&</sup>lt;sup>1</sup> It is important to note that these behaviors may also be classified as indices, as opposed to signals, insofar as their signaling function may be a byproduct of another (non-signal related) evolved function (Maynard Smith & Harper, 2003). Nevertheless, because we are interested in how these behaviors may function as signals of commitment, we have chosen to approach them as signals.

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