Personality, perceived appropriateness, and acknowledgement of social influences on food intake

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ABSTRACT

Social influences are powerful determinants of food intake. Whereas some people are willing to acknowledge social influences on their food intake, others seem to actively deny being influenced by social cues. Across three samples (total $n = 835$), we examined factors that prior theory and research suggest might predict people's willingness to acknowledge social influences on their food intake. These included conformity, self-monitoring, sociotropy, self-esteem, empathy, and the Big Five personality traits. Conformity, self-monitoring, and sociotropy were the most consistent predictors of acknowledgement of social influences on food intake, and conscientiousness was also related to acknowledgement of social influences. Furthermore, those effects were mediated by the extent to which people believe that eating in response to social cues is appropriate. These findings suggest that people who are more concerned with, and attuned to, the social world are more willing to acknowledge being influenced by social factors. Importantly, individuals who are less willing to acknowledge social influences on their food intake may not actually be any less influenced by social cues. Failing to acknowledge social influences on food intake could have implications for people's ability to regulate their eating appropriately and also for their self-evaluations.

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1. Introduction

Social context is a powerful determinant of behavior. One domain in which social factors are particularly potent is in influencing people's food intake. For example, people adjust their food intake to model that of their eating companions, eating little when their companions eat only a little, and eating more when their companions eat more (Herman, Roth, & Polivy, 2003; Vartanian, Spanos, Herman, & Polivy, 2015). This modeling effect is one of the most robust influences on food intake. Modeling has been demonstrated in a number of correlational and experimental studies, and is observed under a wide variety of conditions. For example, modeling occurs with snack foods (Robinson, Tobias, Shaw, Freeman, & Higgs, 2011) and during meals (Hermans, Larsen, Herman, & Engels, 2012), among children (Salvy, Vartanian, Coelho, Jarrin, & Pliner, 2008), and even when participants have been food-deprived for up to 24 h (Goldman, Herman, & Polivy, 1991). Modeling persists even when the model is not physically present and participants are exposed instead to a "remote confederate" list indicating the amount of food eaten by supposed prior participants (Roth, Herman, Polivy, & Pliner, 2001).

Despite a substantial body of research demonstrating that social factors can strongly influence food intake, people typically fail to acknowledge these influences when explaining their eating behavior (Vartanian, Herman, & Wansink, 2008). For example, a series of experiments by Vartanian, Sokol, Herman, and Polivy (2013a) showed that, although participants' food intake is powerfully influenced by the behavior of the experimental confederate, participants are much more likely to use factors such as taste and hunger than the behavior of the confederate to explain their food intake. Not only did participants in those studies underreport the influence of the social model's behavior, but they were also inaccurate in their overall explanations for their food intake. That is, participants' reports of the extent to which they were influenced by the various cues (hunger, taste, or social factors) were unrelated to the extent to which their behavior was actually influenced by those particular cues. A similar failure to acknowledge social influences on behavior has also been observed in domains other than eating, such as energy-conservation behavior (Nolan, Schultz, Cialdini, Goldstein, & Griskevicius, 2008).

Are people unaware that social influences are operating, or are they simply reluctant to acknowledge those influences on their behavior? Considerable social psychological research indicates that people's explanations for their behavior may be motivationally driven. Research on the actor–observer effect and on the third-person effect has shown that people make different attributions for their own behavior than for the behavior of others. For example, people tend to acknowledge

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external influences (such as advertising) on the behavior of others, but typically deny these influences on their own behavior (e.g., Douglas & Sutton, 2004). Other studies have found that people can accurately predict other people's behavior but are prone to making inaccurate predictions of their own behavior (e.g., Epley & Dunning, 2000).

There is evidence that the failure to acknowledge social influences on one's own food intake might be motivationally driven. Spanos, Vartanian, Herman, and Polivy (2014) found that participants were able to accurately identify social influences on the food intake of other people, but that there were individual differences in the extent to which participants accurately identified social influences on their own food intake. Spanos et al. (2014) created the Social Eating Scale to assess people's self-reported tendency to eat in response to social cues in their everyday lives. During a social-eating situation, participants who scored high on this measure (high acknowledgers) were relatively accurate in reporting on the extent to which their food intake was influenced by the behavior of their eating companion. In contrast, participants who scored low on this measure (low acknowledgers) appeared to actively deny being influenced by their eating companion: the more their food intake closely mimicked that of their eating companion, the less likely they were to acknowledge being influenced by that companion. These findings suggest that some people are willing to acknowledge social influences on their food intake, whereas others appear to actively deny these influences.

1.1. Individual differences in the acknowledgement of social influences on food intake

Spanos et al. (2014) found that scores on the Social Eating Scale predicted the extent to which people were willing to report that their food intake was influenced by social factors in a specific social-eating situation. What remains unclear, however, is *why* some people are more willing than others to acknowledge social influences on their food intake. Two possibilities that we explore in the present research have to do with (a) variations in perceptions of the appropriateness of social influence as an explanation for one's own behavior and (b) variations in more general personality characteristics.

1.1.1. Appropriateness

Herman et al. (2003) suggested that people's food intake in a social context may depend on their perceptions of appropriate eating behavior in that particular context. That is, people often use the food intake of others as a guide to determining how much they themselves should eat. (More specifically, Herman et al. proposed that people will ordinarily try to eat a little less than what the others are eating.) Vartanian et al. (2013a) directly tested this prediction and found that participants eating with a confederate who ate very little reported a lower norm of appropriate intake than did participants eating with a confederate who ate a lot. Furthermore, the perceived norm of appropriate intake fully mediated the link between the social model's behavior and participants' own food intake. Just as perceived appropriateness plays a role in determining people's food intake in social situations, it is possible that people's willingness to acknowledge social influences depends on the degree to which it is perceived as appropriate to follow social cues when eating (or to use social cues to infer how much is appropriate to eat).

Nisbett and Wilson (1977) argued that people rely on lay theories, or common-sense models, when explaining their behavior. Similarly, with respect to explanations for eating behavior, researchers have argued that people rely on common-sense explanations about what drives food intake; these common-sense explanations focus on the individual's hunger level and on the taste of the available food (Vartanian et al., 2008, 2013a). It is likely that the common-sense factors of hunger and taste are also considered appropriate or acceptable reasons for eating a particular amount, whereas other factors (such as the behavior of others, portion size) are regarded as more arbitrary and therefore inappropriate reasons for eating as much or as little as one does. To the

extent that people believe that eating in response to social factors is appropriate or acceptable, they should be willing to acknowledge those influences on their own behavior and may be reasonably accurate in doing so; in contrast, to the extent that people believe that eating in response to social factors is inappropriate or unacceptable, they may be motivated to deny those influences on their own behavior.

1.1.2. Personality characteristics

There are some personality characteristics that might be related to people's willingness to acknowledge social influences on their food intake. These include: conformity, which refers to the tendency to adjust one's behavior to keep it consistent with the behavior of others (Cialdini & Goldstein, 2004); self-monitoring of expressive behavior, which reflects people's tendency to observe and control the way they present themselves and behave in social situations (Snyder, 1974); and extraversion, which generally reflects a socially attentive and "open" orientation (Peterson, Morey, & Higgins, 2005). These characteristics all seem to capture a willingness to be engaged with the social environment and a tendency to be influenced by that environment. Therefore, it might be that individuals who score high on these characteristics also believe that it is appropriate to eat in response to social cues, and would therefore be willing to acknowledge those influences on their food intake.

Other characteristics have been linked to people's eating behavior in a social context. For example, Exline, Zell, Bratslavsky, Hamilton, and Swenson (2012) found that sociotropy, an excessive concern with pleasing others and maintaining social harmony, predicted how much participants ate, but only when they believed that the confederate wanted them to eat. Furthermore, Robinson et al. (2011) and Robinson, Benwell, and Higgs (2013) found that modeling was stronger among individuals who were high in trait empathy and among individuals who were low in trait self-esteem, but only when the model was physically present. Given that these personality characteristics are related to people's food intake in social situations, they might also be associated with people's willingness to acknowledge social influences on their food intake.

1.2. The present research

There are individual differences in the extent to which people acknowledge social influences on their food intake, but little is known about what differentiates those who acknowledge social influences from those who are less willing to acknowledge social influences. The aim of this research is to determine whether perceptions of the appropriateness of social influences, as well as certain personality traits, are related to acknowledgement of social influences. First, we predicted that social factors would be perceived as less appropriate reasons for food intake compared to other more common-sense factors (e.g., hunger). Second, we predicted that acknowledgement of social influences would be positively related to the belief that eating in response to social cues is appropriate. Third, we explored a number of personality characteristics that might be related to the acknowledgement of social influences (e.g., conformity, self-monitoring, sociotropy, empathy, and self-esteem). Finally, we tested the possibility that perceived appropriateness of social influences would mediate the association between personality characteristics and acknowledgement of social influences on food intake.

2. Method

2.1. Participants

Data were collected from three different samples via Amazon's Mechanical Turk. Participants were excluded if they provided incomplete data or if they failed any of the validity checks that were included in the surveys. The data reported below are based on the final sample of