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Trust and doubt: An examination of children's decision to believe what they are told about food

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ABSTRACT

The domain of food is one that is highly relevant and vital to the everyday lives of children. However, children's reasoning about this domain is poorly understood within the field of developmental psychology. Because children's learning about food, including its evaluative components (e.g., health, taste) is so heavily dependent on information conveyed by other people, a major developmental challenge that children face is determining who to distrust regarding food. In three studies, this investigation examined how 3- and 4-year-olds and adults ($N = 312$) use different cues to determine when to ignore informant information (i.e., distrust what an informant tells them by choosing an alternative) in food- and non-food-specific scenarios. The results of Study 1 indicated that by age 4 years, children are less trusting of inaccurate sources of information compared with sources that have not demonstrated previous inaccuracy. Study 2 revealed that these results are applicable across the domain of objects. The results of Study 3 indicated that by age 4, children trust benevolent sources more often than malevolent ones. Thus, when reasoning about the evaluative components of food, by age 4, children appraise other people's untrustworthiness by paying attention to their inaccuracy and malevolence.

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Introduction

Every day, children receive information about food from other people. Unfortunately, not all of the sources are trustworthy. Some sources may provide inaccurate information about food pertaining to the evaluative component of taste. For example, even parents report that it is acceptable to mislead their children in order to influence their behavior, including eating practices (Heyman, Liu, & Lee, 2009) and will sometimes try to encourage children to eat healthy foods by misrepresenting their taste (e.g., "Try this, it's delicious and it is good for you too!") (see Birch, Fisher, & Grimm-Thomas, 1999; Tinsley, 2003). There are even cookbooks that advocate tricking children into eating their fruits and vegetables—*The Sneaky Chef: Simple Strategies for Hiding Healthy Foods in Kids' Favorite Meals* (Lapine, 2007), *The Sneaky Chef to the Rescue: 101 All-New Recipes and "Sneaky" Tricks for Creating Healthy Meals Kids Love* (Lapine, 2009), and *Deceptively Delicious: Simple Secrets to Get Your Kids Eating Good Food* (Seinfeld, 2008). Sources may also provide inaccurate information pertaining to the evaluative component of health. Many examples can be found among some of the 40,000 television commercials the average child sees each year. These advertisements often use cartoon characters to obscure the truth and persuade viewers of the nutritional value of unhealthy foods that are often high in added sugars, fat, sodium, and/or saturated and trans fats (e.g., sugary cereals are marketed as a "part of a complete/well-balanced/nutritious diet") (see Batada, Seitz, Wootan, & Story, 2008, and Kunkel et al., 2004, for reviews).

Within this milieu, it stands to reason that children likely face considerable difficulty in discerning when it is best to trust or doubt someone's assertions about the evaluative components of food. Although there are two separate bodies of research on children's evaluative food categorization and children's trust in testimony, these areas of research have yet to be examined together in-depth. Thus, it is still an open question how children determine whether or not to trust information provided to them in food-related scenarios. That is, do children assess a person's trustworthiness when considering whether they should be skeptical about the evaluative status of a food? By bridging these two bodies of research in the current investigation, we sought to examine the extent to which children take into account cues that may indicate they should not trust information given to them (inaccuracy and malevolence) when considering testimonies regarding the evaluative components of food. We expect that children will generally trust as a default unless they are aware of an informant's inaccuracy or malevolence, which will theoretically prompt them to override their default trust and become distrustful. This is a timely investigation given that researchers have recently acknowledged the significance of studying children's reasoning about food, and the contributions of social learning, which is an important area of interest among developmental psychologists (e.g., Frazier, Gelman, Kaciroti, Russell, & Lumeng, 2012; Shutts, Kinzler, & DeJesus, 2012).

Children's evaluative categorization

Evaluative food categories include foods that share the same value-laden assessment. The evaluative food category of healthy/unhealthy, for example, is based on a nutritional assessment of the foods. Another example is the evaluative category of yummy/yucky foods, which are based on a taste assessment of the foods (Nguyen, 2008; Nguyen & McCullough, 2009; Nguyen & Murphy, 2003). Research has found that by age 3 or 4 years, children can classify different foods as either healthy or unhealthy (Nguyen, 2007a; Nguyen, 2007b; Nguyen & Murphy, 2003), can make distinctions between edible and inedible objects (Rozin, Hammer, Oster, Horowitz, & Marmora, 1986; Siegal & Share, 1990) and will reject foods based on their distaste (Fallon, Rozin, & Pliner, 1984). Research has also found that children use their evaluative category knowledge to guide their food choices depending on the goals they have in mind (e.g., selecting vegetables to promote their bodies' health) (Nguyen, Gordon, & McCullough, 2011; see also Nguyen, Girgis, & Robinson, 2015).

Although the extant literature has documented children's knowledge of evaluative categories, there is currently a dearth of research on how children learn evaluative information about the health and taste of foods. One study found that by age 3 years, children believe that adults are better informants than children about food nutrition (VanderBorght & Jaswal, 2009). Another study found