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What Can Metaphors Tell Us about Personality?

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TEASER: Are you in your head or your heart? How much do you like sweet food? Recent research suggests that how you answer these questions can say a lot about your personality.

### Abstract

Theorists propose that metaphors are not mere figures of speech, but can actively shape one's thoughts, feelings, and behaviors. Social psychologists have supported this claim over the past 10 years. Personality psychologists, though, have only recently begun investigating how metaphors can inform our understanding of what makes us different from each other. This review focuses on projects demonstrating links between metaphor and personality. As an example, people have been asked whether they locate the self in the head or the heart. Head people are (more) rational and cold, whereas heart people are emotional and warm. In addition, an individual differences approach can reveal what it is that metaphoric thinking does to and for people. Overall, individual difference approaches to common metaphors are shown to be informative not only in understanding how people differ from each other but also in extending the metaphor literature.

Keywords: Metaphor, Personality, Individual Differences, Color, Taste, Self

Our language is filled with metaphor (Gibbs, 1994). We have “bright” ideas, try to stay “balanced”, and feel “close” to others, but sometimes feel “down”, have “dark” thoughts, and “explode” with rage. What is the purpose of such language?

According to Lakoff and Johnson (1980; 1999), metaphors allow us to understand abstract thoughts and feelings that cannot be directly seen, heard, touched, smelled, or tasted. Stated a different way, we may speak metaphorically because we think metaphorically. Social psychologists have provided some evidence for this idea (Landau, Meier, & Keefer, 2010). For example, making people angry leads them to see the color red, consistent with metaphors for anger like “seeing red” (Fetterman, Robinson, Gordon, & Elliot, 2011). As another example, asking people to taste sweet foods renders them nicer, consistent with metaphors like “a sweet person” (Meier, Moeller, Riemer-Peltz, & Robinson, 2012). This work has provided insights into the metaphoric minds of people in general, but might metaphors also provide some insights into personality? This is an important question because personality captures the enduring, consequential ways in which people differ from each other.

Certainly, metaphors are often used to describe people’s personalities (e.g., “sweet” or “bitter”, “warm” or “cold”, “big-hearted”, etc.). But, it is also clear that we should not take such language literally. For example, it is unlikely that certain people actually taste sweet, have bigger hearts, or are warmer to the extent that they are nicer. Why do we use such metaphors to describe personality, then? According to metaphor theorists (e.g., Robinson & Fetterman, in press), metaphors aid us in conceptualizing differences between people. Consider the “sweet person” metaphor. Eating sweet foods is pleasant and rewarding just like interacting with especially nice people is pleasant and rewarding. There is thus a certain metaphoric logic to thinking of nice people as sweet. But does such logic provide any actual insights into personality?

*Metaphoric Preferences and Biases*

A useful way of proceeding is to build on metaphoric links that have been established in social psychological studies. Based on the idea that anger is metaphorically red (e.g., “red with rage”, “seeing red”), Fetterman, Meier, and Robinson (2012) hypothesized and found that anger words were categorized faster when in a red font color. Fetterman et al. (2011) similarly found that making people angry led them to more frequently “see” ambiguous patches as red in color. Additional studies have shown that people perceive opponents wearing red uniforms to be more dominant and hostile in Tae Kwon Do matches (Feltman & Elliot, 2011); and, in fact, Tae Kwon Do athletes wearing red gear are more likely to be awarded points in such matches (Hagemann, Strauss, & Leissing, 2008). That is, it appears that the color red can actually make a person more hostile (or at least dominant) in their behavior. [Image 1 about here]

Fetterman and Robinson (2013) then asked people to judge the interpersonal hostility of citizens from different countries on the basis of their flags. Some flags (e.g., that of Switzerland) were primarily red, whereas others (e.g., Micronesia) were primarily blue. There was a pronounced tendency to think that people from red-flagged nations were lower in agreeableness (a personality trait related to hostility) than those from blue-flagged nations, as shown in Figure 1. There thus appears to be a systematic link of hostility with the color red. This red-hostility link may affect how we interact with others (Dovidio, Gaertner, Esses, & Brewer, 2003). For example, if hostile inferences are made on the basis of the color red, then we may be unfairly wary of, or hostile toward, citizens from red-flagged nations. Consistent with this point about unfair treatment, there is no *actual* link between flag color and how agreeable a country’s citizens are (Fetterman & Robinson, 2013). [Figure 1 about here]

Although red-flagged nations are not more hostile, it could still be that red preferences or biases distinguish more and less hostile people within a country. This was the focus of research by Fetterman, Liu, Elliot, and Robinson (2013). Study 1 asked people whether they liked the color blue or red better. Red-preferring individuals scored higher in interpersonal hostility than blue-preferring individuals. Study 2 asked people to identify degraded patches as red or blue and found that people who more hostile were biased to see the color red more often. Study 3 extended Study 2 by comparing biases to see the colors red and green. Study 4 returned to the simple color preference question of Study 1 and found that red-preferring people were more hostile in their social behavior (e.g., by rejecting a monetary offer in order to punish another person). Thus, people who have red-related preferences and biases *do* appear more hostile and we might be more wary of their potential behaviors for this reason. Indeed, our potential friends or colleagues might be asked how much they like the color red.

In another preference-related investigation, Meier et al. (2012) focused on metaphors linking agreeable personalities to sweet tastes. A first study established that people claiming to like sweet foods (relative to other tastes) were judged to be more agreeable. The second study was particularly interesting. In this study, people were asked how much they liked foods that were sweet (e.g., ice cream), bitter (e.g., celery), salty (e.g., pretzels), sour (e.g., cottage cheese), and spicy (e.g., salsa). People who liked sweet foods, in particular, scored higher on the trait of agreeableness. A representative result of this type is displayed in Figure 2. A third study found that people who liked sweet foods to a greater extent were more helpful in their behavior, for example by volunteering for a city-wide flood cleanup effort in Fargo, North Dakota. When in need, then, you might be better off turning to your friend that always orders dessert rather than your friend that never does. [Image 2 and Figure 2 about here]

Why do preference-related judgments work in capturing differences between people, though? We suggest that people are drawn toward experiences (e.g., colors or tastes) that metaphorically fit their personalities (Robinson & Fetterman, in press; Swann, 1992). Accordingly, hostile people like red precisely because: (a) they are hostile and (b) hostility is metaphorically red. Similarly, agreeable people like sweet tastes because: (a) they are agreeable and (b) agreeableness is metaphorically sweet. If so, preference-related judgments can be recommended in future studies of metaphor and personality as well. For example, we should expect (and we have found) that depressed people prefer “dark” to “light”, consistent with prominent metaphors for depression (e.g., “being in a dark place”).

### *The Self's Metaphoric Location*

Most people feel as if the “self” resides somewhere in the body. However, the body has many different parts. Which of these do we associate with the self? From Plato onward, two particular body parts and their metaphoric functions have been highlighted (Swan, 2009). Somewhat simplistically stated, the heart is emotional and the head is logical. There are many metaphoric phrases of this type. To “follow one’s heart” is to follow one’s emotional sentiments, whereas to “have one’s head on straight” is to approach interactions in a rational, if not logical, manner. A person “has a big heart” to the extent that his/her positive feelings for others are pronounced, is “in one’s head” to the extent that he/she is somewhat detached, and many phrases metaphorically pit these two body parts against each other (e.g., “my heart says yes, but my head says no”). [Image 3 about here]

Given the prominence of such metaphors, it seemed potentially useful to ask people whether they conceptualize themselves more as heart- or head-related entities. A simple forced choice question of this type was created. Subsequently, answers to this question were found to be

important to the individual difference literature (Fetterman & Robinson, in press). Across studies, approximately 50% of people chose the heart as the locus of the self and 50% chose the head. Emotionality is higher among females (Robinson & Clore, 2002) and, consistent with this point, more females than males thought the self was located in the heart.

Of perhaps more importance were the personality-related findings. Heart-locators scored higher on measures of emotionality and interpersonal warmth. Head-locators described themselves as more logical, but they also scored higher in interpersonal coldness and were less agreeable. These results are quite consistent with metaphors for the heart (e.g., it is emotional) versus the head (e.g., it is logical). It was also found that heart-locators preferred relying on intuition, whereas head-locators preferred relying on rational thought, when making decisions. Other studies established that head-locators had higher GPAs and answered general knowledge questions more accurately and that heart-locators were more likely to solve moral dilemmas in an emotional manner. Figure 3 presents idealized data of the type found in the Fetterman and Robinson (in press) paper. [Figure 3 about here]

One further study extended this analysis to daily patterns of emotion and behavior. Consistent with the idea that heart-locators are more emotional, they (relative to head-locators) reacted to stressful events with more intense negative emotions. Consistent with the idea that head-locators are more interpersonally hostile, they (relative to heart-locators) reacted to daily provocations with greater aggressive behavior (e.g., arguing and yelling). Additional analyses indicated that the head-heart measure was unique in its ability to account for the diversity of findings obtained across studies (Fetterman & Robinson, in press).

In sum, people solve the problem of representing the self by thinking about it in metaphoric terms – i.e., as a head-related or heart-related being. When they locate the self in the

head (heart), the self becomes invested with attributes metaphorically linked to it such as greater rationality (emotionality). Although it is quite likely that a smart person will gravitate toward thinking that the self is in the head and a nice, emotional person will gravitate toward thinking of the self as in the heart, we also suggest that self-locations reinforce such differences between people. Additional studies are investigating other correlates of self-location such as empathy, the quality of personal relationships, and scholastic performance across time.

### *Is Metaphoric Thinking Functional?*

People presumably use metaphors because they help one to understand non-tangible concepts such as the self or its emotions (Lakoff & Johnson, 1999). An individual differences approach might be particularly useful in examining this idea. Specifically, it is almost certainly the case that people differ in the extent to which they use metaphors in their daily lives. If metaphoric thinking is functional, then people who use metaphors more often should be advantaged relative to their non-metaphorical counterparts. This direction of research was the focus of the first author's dissertation. As an initial step, a 30-item metaphor use questionnaire was created. People had to choose a literal phrase (e.g., "she makes rational decisions") or a corresponding metaphoric phrase (e.g., "she uses her head") as one that the self would typically speak, write, or think. Responses to the questionnaire were quite reliable and people differed substantially along this metaphor use dimension.

To assess whether (greater) metaphor use is functional, two additional studies focused on potential relations with emotional intelligence. The rationale for this focus is that emotions are non-verbal, non-physical entities and metaphors are thought to help people understand them (Crawford, 2009; Meier & Robinson, 2005). Consistent with this idea, metaphor users scored higher on scenario-based measures of emotional intelligence (e.g., one requiring them to



determine which two emotions would most likely co-occur in a particular situation). They were also less disrupted by the negative events of their daily lives. Although more work remains to be done, these results point to the functionality of metaphoric thought in the important domain of emotions. Armed with a well-performing metaphor use scale, the benefits and potential costs of metaphoric thinking can be more fully evaluated in future studies.

### *Conclusions*

Social psychologists have focused on whether metaphor-related experiences (e.g., of physical warmth or coldness) affect people in general. Personality psychologists can answer a different sort of question – namely, whether metaphors matter in what makes us different from each other. The answer to the latter question appears to be yes. The extent to which people like or prefer certain types of experiences (e.g., sweet foods) provides important information concerning their personalities. Whether people locate the self in the heart or the head allows us to understand whether they are logical or emotional, friendly or distant, smarter or less smart, etc. People differ considerably in whether they think metaphorically or not and such individual differences may be important in appreciating the functions – both benefits and potential costs – of metaphoric thinking. We envision quite a few future insights along the present lines, insights that will be important to both the personality and metaphor literatures.

What advice *might* be made on the basis of the reviewed findings? Be wary of people who wear red or seem to surround themselves with this color. Avoid wearing red oneself as it might provoke hostility in others. Find out whether potential friends like sweet foods or not. The former are likely to be better friends. Seek a head-locator for an intellectual conversation, but a heart-locator for a shoulder to cry on. These are but a few of the sources of advice that might follow from treating metaphors seriously in the study of personality.

## References

- Crawford, L. (2009). Conceptual metaphors of affect. *Emotion Review, 1*, 129-139.
- Dovidio, J. F., Gaertner, S. L., Esses, V. M., & Brewer, M. B. (2003). Social conflict, harmony, and integration. In: T. Millon & M. J. Lerner (Eds.), *Handbook of psychology: Personality and social psychology* (Vol. 5, pp. 485-506). Hoboken, NJ: John Wiley & Sons.
- Feltman, R., & Elliot, A.J. (2011). The influence of red on perceptions of dominance and threat in a competitive context. *Journal of Sport and Exercise Psychology, 33*, 308-314.
- Fetterman, A. K., Liu, T., Elliot, A. J., & Robinson, M. D. (2013). Extending color psychology to the personality realm: Red preferences and perceptual biases predict interpersonal hostility. *Manuscript under review*.
- Fetterman, A. K., & Robinson, M. D. (2013). Flag color influences perceptions of hostility for the citizens' of the country. *Manuscript in preparation*.
- Fetterman, A. K. & Robinson, M. D. (in press). Do you use your head or follow your heart? Self-location predicts personality, emotion, decision making, and performance. *Journal of Personality and Social Psychology*.
- Fetterman, A. K., Robinson, M. D., Gordon, R. D., & Elliot, A. J. (2011). Anger as seeing red: Perceptual sources of evidence. *Social Psychological and Personality Science, 2*, 311-316.
- Fetterman, A. K., Robinson, M. D., & Meier, B. P. (2012). Anger as "Seeing Red": Reaction time evidence for an implicit association. *Cognition and Emotion, 26*, 1445-1458.
- Gibbs, R. W. (1994). *The poetics of mind: Figurative thought, language, and understanding*. Cambridge, UK: Cambridge University Press.

- Hagemann, N., Strauss, B., & Leissing, J. (2008). When the referee sees red. *Psychological Science, 19*, 769–771.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago, IL: University of Chicago Press.
- Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to Western thought*. New York: Basic Books.
- Landau, M. J., Meier, B. P., & Keefer, L. A. (2010). A metaphor-enriched social cognition. *Psychological Bulletin, 136*, 1045-1067.
- Meier, B. P., Riemer-Peltz, M., Moeller, S. K., & Robinson, M. D. (2012). Sweet taste preferences and experiences predict prosocial inferences, personalities, and behaviors. *Journal of Personality & Social Psychology, 102*, 163-174.
- Meier, B. P., & Robinson, M. D. (2005). The metaphorical representation of affect. *Metaphor and Symbol, 20*, 239-257.
- Robinson, M. D., & Clore, G. L. (2002). Belief and feeling: Evidence for an accessibility model of emotional self-report. *Psychological Bulletin, 128*, 934-960.
- Robinson, M. D., & Fetterman, A. K. (in press). Toward a metaphor-enriched personality psychology. In M. Landau, M. D. Robinson, & B. P. Meier (Eds.) *The power of metaphor: Examining its influence on social life*. Washington, DC: American Psychological Association.
- Swan, T. (2009). Metaphors of body and mind in the history of English. *English Studies, 90*, 460-475.
- Swann, W. (1992). Seeking 'truth,' finding despair: Some unhappy consequences of a negative self-concept. *Current Directions in Psychological Science, 1*, 15-18.

## Glossary

Metaphor: A non-literal link between a concept (e.g., nice) and a more concrete perceptual experience (e.g., sweet) that seems fitting to most people.

Personality: Substantive ways in which people differ from each other (e.g., how friendly they are).

Agreeableness: A personality trait characterized by friendliness, honesty, and empathy. Low levels of agreeableness are marked by hostility and aggression.

Individual Difference: A quantity or quality that varies by individuals. An individual difference is more encompassing than a personality trait (e.g., it includes intellectual performance).

Moral Dilemmas: Decision-making scenarios in which the morally correct response is somewhat uncertain. The most common scenarios ask people whether they would perform an emotionally aversive action (e.g., kill a person) for a greater good (e.g., saving others).

Reliable: The extent to which people are consistent in how they respond to a questionnaire or to its individual items.

Emotional Intelligence: The extent to which a person can perceive emotions accurately, can understand them, and can regulate them when they might be problematic.

### Biographies

[image 4] Adam K. Fetterman is a Postdoctoral Researcher at the Knowledge Media Research Center (KMRC) in Tübingen, Germany. He received his Ph.D. in social/personality psychology from North Dakota State University in 2013 under the mentorship of Michael D. Robinson. During his time as a graduate student, he was productive in his research and continues to conduct investigations in the realms of metaphor, embodiment, personality, motivation, and emotion. In addition, he recently joined the editorial board of the *Journal of Research in Personality*.

[image 5] Michael D. Robinson is a Professor of Psychology at North Dakota State University. He received his Ph.D. in social psychology from the University of California, Davis, in 1996. Subsequently, he was trained in a three-year NIMH-supported postdoctoral position, working during this time with Richard J. Davidson and Gerald L. Clore. He is a prolific researcher in the areas of personality, cognition, emotion, and self-regulation. In addition, he has been consistently funded by the National Science Foundation and/or the National Institutes of Health. He also has extensive editorial experience, including at the journals *Cognition and Emotion*, *Emotion*, *Journal of Personality*, *Journal of Personality and Social Psychology*, and *Social and Personality Psychology Compass*. He is an Editor of the *Handbook of Cognition and Emotion* (Guilford Press, 2013).

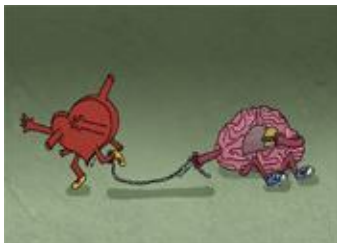
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Image 3: <http://mbollutchu.deviantart.com/art/Chained-Heart-283944959> by mbollutchu free use



Or: original website no longer exists



Image 4:



Image 5:



Figure 1

*Hostility Ratings for Countries with Red and Blue Flags*

Figure 2

*Levels of Agreeableness as a Function of Liking Sweet Foods (Low versus High)*

Figure 3

*Idealized Emotional and Logical Personality Scores for Heart versus Head Locators*



