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COMMENTARIES



## My Brain Contains Multitudes: The Value of a Flexible Approach to Identity

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Humans value our identities as individuals and as members of groups: We feel a sense of meaning when we construct our life stories (McAdams, 2001) and a sense of belonging when we lose ourselves in a collective (Baumeister & Leary, 1995; Brewer, 1991). Yet it has long remained unclear how this value is represented in the brain. Meanwhile, in the last two decades, a robust research literature has characterized the computations by which the brain represents, learns about, and uses a common currency of value to guide decisions about diverse goods (Chib, Rangel, Shimojo, & O’Doherty, 2009; Hare, O’Doherty, Camerer, Schultz, & Rangel, 2008; Kable & Glimcher, 2009; Rangel, Camerer, & Montague, 2008). Yet this work has tended to focus on material gains, such as money, food, or possessions. By fitting these ideas together in the identity-value model (IVM), Elliot T. Berkman, Jordan L. Livingston, and Lauren E. Kahn (this issue) offer a powerful approach for understanding how the brain uses identity to guide behavior. Valuation can serve as a bridge between abstract social motives and neural computation: To the extent that people find identity motivationally meaningful, identity should influence neural representations of value within a common currency (Levy & Glimcher, 2012; Ruff & Fehr, 2014).

At the same time, the IVM assumes that identity is, on the whole, a “relatively stable mental representation of the self” (p. 79). Berkman and colleagues acknowledge that identity (or aspects of it) can be somewhat malleable but assume that identity is broadly stable enough to have a consistent impact on valuation across settings. Here, we suggest that this assumption may not hold true when considering people’s identification with social groups—termed *social identification*.

Social identification involves defining oneself as part of a group and feeling invested in that group (Leach et al., 2008; Tajfel & Turner, 1979; Turner, Oakes, Haslam, & McGarty, 1994). Social groups play an important role in people’s lives: Groups provide access to material and social resources (Brewer, 1988; Correll & Park, 2005), promote a sense of belonging (Baumeister & Leary, 1995; Brewer, 1991), and reduce people’s uncertainty about how to act (Hogg, 2000). As a result, people are more motivated by and willing to pay for outcomes that fulfill the norms of their groups (Akerlof & Kranton, 2000; Oyserman, Fryberg, & Yoder, 2007). These insights suggest that social identities can alter value representations—an insight included in the IVM. However, we elucidate three ways in which social identities are highly flexible, suggesting that identity can impact value in different ways across contexts. We

suggest expanding the IVM to give social identity a more central role, and in doing so to account for these forms of flexibility.

### The Flexibility of Self-Construal

People construe their “self” in fundamentally different ways across situations. In some settings, people construe themselves as individuals, whereas in other settings people construe themselves as members of relationships or social groups (Brewer & Gardner, 1996). As people move from individual identities toward social identities, they can become “depersonalized,” seeing themselves as an interchangeable member of a collective (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). In these cases, people’s attitudes, behaviors, emotions, and sense of self-interest often change to match their groups (Brewer, 1991; Seger, Smith, & Mackie, 2009; Turner et al., 1987). This insight suggests stronger flexibility than that suggested by the IVM: Neural representations of value may depend on how people construe themselves in a given moment. When people construe themselves as part of a group, their representations of value are likely to change, as reflected in their behavior and in neural regions linked to value (e.g., ventral striatum and vmPFC; Clithero & Rangel, 2013).

Evidence supports the idea that self-construal shapes valuation, both when people receive rewards and when they make decisions. When people are primed with an interdependent self-construal (emphasizing participation in a collective), they show similar neural responses in ventral striatum when they win money or witness a friend win money; in contrast, when people are primed with an independent self-construal (emphasizing one’s individuality), they show greater ventral striatum responses for their own wins (Varnum, Shi, Chen, Qiu, & Han, 2014). Similarly, when a group identity is made salient, people give more resources to distant others in social dilemma games (De Cremer & Van Vugt, 1999; Kramer & Brewer, 1984)—a type of decision making linked to neural representations of value in vmPFC (Wills, Hackel, & Van Bavel, 2017). Shifting to a group-level identity may even impact neural responses related to self-reference, which in turn predict later social decisions. For instance, in one neuroimaging study (Cikara, Jenkins, Dufour, & Saxe, 2014), participants read descriptions of their own moral behavior (provided earlier) or the moral behavior of another person. This type of task induces greater vmPFC responses during self-reflection, as reviewed by Berkman and

colleagues. When completing the task during group competition, however, participants who showed weaker vmPFC responses to their own moral behavior were also more willing to harm the outgroup. In this manner, self-construal predicts social preferences.

Although these examples depict social preferences, shifts in identity may also change nonsocial preferences, consistent with the idea that the brain represents diverse goods in a common currency of value (Levy & Glimcher, 2012; Peters & Büchel, 2010; Ruff & Fehr, 2014; Zaki, López, & Mitchell, 2014). As people move from personal to social identification, they may value even basic goods—like foods—differently. To test this idea, Hackel, Coppin, Wohl, and Van Bavel (2017) asked Southern participants to rate the expected tastiness of foods, some of which were representative of Southern identity (e.g., grits) and some of which were not (e.g., pizza). In addition, participants were primed with either Southern identity or their personal identity. Participants who reported high identification with Southerners expected that Southern foods would be tastier than non-Southern foods—but only when primed with social, as opposed to personal, identity. Thus, people can flexibly shift between identities at different levels of expansiveness, and these identities can serve as different lenses through which to view the world (Packer & Van Bavel, 2014; Xiao, Coppin, & Van Bavel, 2016).

### The Flexibility of Self-Categorization

Even when people construe themselves as group members, rather than as individuals, social identity introduces a second source of flexibility. People have multiple social identities that can become salient in different contexts (e.g., national, religious, or professional identities)—a core insight of self-categorization theory (Turner et al., 1987; Turner et al., 1994). From the perspective of self-categorization theory (SCT), different contexts highlight different ways in which people can cleave the world into a meaningful “us” and “them.” For instance, during a primary political campaign, people group themselves based on the primary candidate they support; during a general election a few months later, members of a party tend to coalesce and contrast themselves from the other party. Under these circumstances, people shift their economic preferences accordingly. For instance, one study examined intergroup bias in prosocial giving during the 2008 U.S. presidential election (Rand et al., 2009). During the primary campaign period, supporters of Hillary Clinton and Barack Obama showed in-group bias by sharing more money with supporters of their preferred candidate. After the Democratic National Convention, this bias disappeared in the face of party unity. Because other work links prosocial decisions to value representations in vmPFC (Zaki et al., 2014; Zaki & Mitchell, 2011), these findings suggest that self-categorization can flexibly reorient value.

Changes in self-categorization can even alter long-standing biases in evaluation. For instance, Van Bavel and colleagues assigned participants to novel mixed-race teams and measured participants’ attitudes toward members of each team (Van Bavel & Cunningham, 2009; Van Bavel, Packer, & Cunningham, 2008). Because each team had an equal number of Black and White members, this manipulation made race

irrelevant to group membership. Although past work had identified robust implicit biases based on race, participants in this research had positive implicit attitudes toward fellow team members, regardless of race (Van Bavel & Cunningham, 2009). In addition, participants reported liking ingroup members more than outgroup members regardless of race, and this bias was mediated by orbitofrontal cortex (Van Bavel et al., 2008)—a region again associated with valuation (Kringelbach, 2005). Thus, when people adopt a different self-categorization, their value representations can change even in the face of ostensibly stable tendencies.

Finally, self-categorization can change how people respond to social norms. Berkman and colleagues note that social groups can affect value both because people value conforming with the behavior of their peers (Zaki, Schirmer, & Mitchell, 2011) and because identity itself can impart value. However, people are also more likely to conform with the behavior of ingroup members (Abrams, Wetherell, Cochrane, Hogg, & Turner, 1990; Platow et al., 2005), even for value-based decisions like choosing how much food to eat (Cruwys et al., 2012). Group-based conformity, in turn, depends on which group categorizations are salient in a given moment (Abrams et al., 1990). In other words, when people shift between social identities, they may value different norms. Altogether, people can shift from one social identity to another, and these shifts can alter value.

### Mixed Effects of Identity on Value and Self-Regulation

The IVM also posits that there is a broadly positive relationship between identity and value, and a positive relationship between value and self-regulation. Berkman and colleagues acknowledge that identity might sometimes negatively impact value for some individuals, such as those with low self-esteem. However, social identity again introduces more nuanced ways in which identity can negatively impact value and self-regulation.

People vary in how much they identify with different groups, and these differences moderate the impact of social identity on behavior (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Leach et al., 2008). In particular, those with low social identification often want to be treated as individuals and resent being categorized as group members (Branscombe, Ellemers, Spears, & Doosje, 1999)—an experience that may subtract, rather than add, value to group-related actions. Social identity can therefore increase or decrease value depending on how a person feels about a particular group, providing a between-person (rather than within-person) source of flexibility.

Supporting this idea, recent work found that Southerners with low social identification expected Southern food to be *less* tasty than non-Southern food, especially when primed by Southern identity (Hackel et al., 2017). In the domain of social preferences, students with low motivational investment in their university may prefer giving money to students from a different school as opposed to ingroup members (Hackel, Zaki, & Van Bavel, *in press*). Moreover, when witnessing ingroup as opposed to outgroup members win money, only individuals with strong investment in the ingroup show larger responses in ventral striatum (Hackel et al., *in press*). These findings support the idea that social identity can increase or decrease value, depending on one’s degree of identification.

At the same time, even when an identity increases value, it may not be universally useful for achieving one's goals. Social groups may have norms like eating unhealthy food or acting dishonestly, in which case social identity can lead to negative outcomes. For instance, when immigrants to the United States feel that their American identity is threatened, they eat more high-calorie and high-fat foods associated with the American diet, which may explain why immigrant groups in the United States tend to eat less nutritious diets over time (Guendelman, Cheryan, & Monin, 2011). People even devalue the efficacy of healthy eating and exercise when they see these activities as incongruous with a salient group identity (Oyserman et al., 2007). Finally, social identities can have a negative impact on prosocial behavior: Priming the professional identity of bankers leads them to act less honestly (Cohn, Fehr, & Maréchal, 2014). These observations remain consistent with the idea that identity alters value but present a challenge for the notion that identity is generally useful for self-regulation. As is true of many tools, it is likely that identity can be used for good or for bad.

Even when an identity is aligned with one's long-term goals, identity can have mixed effects on self-regulation. Most people eventually encounter setbacks or failures when pursuing long-term goals. Berkman and colleagues note that failure may sting more when it feels self-relevant, and people might therefore disidentify with a goal or self-handicap after failure. However, people can also become *too* focused on having an identity after failure. When people have a goal to attain a particular identity—for example, to define themselves as “exercisers”—failures can lead people to pursue symbolic aspects of the identity, like buying exercise gear, as a substitute for more direct achievement in that domain (Braun & Wicklund, 1989; Gollwitzer, Sheeran, Michalski, & Seifert, 2009; Wicklund & Gollwitzer, 1982). Altogether, these considerations suggest a nuanced relationship between identity and value. Social identities can add or take away value, depending on a person's orientation toward a group, and identity motives may sometimes undermine other goals instead of facilitating them.

### Implications for the IVM

Here, we have identified three ways in which social identity introduces flexibility into the relationship between identity and value. First, people can flexibly construe themselves as individuals or group members in different situations. Second, people can categorize themselves based on different social identities at different times. Finally, social identities can have a positive or negative influence on value and self-regulation for different individuals. Although Berkman and colleagues include social identity in the IVM and acknowledge malleability in identity, we suggest a more central role for these phenomena.

How might the IVM expand to address these considerations? First, Berkman and colleagues hope to inspire interventions that leverage identity to enhance self-regulation. Interventions could flexibly cue people to see themselves in terms of identities that are useful for self-regulation challenges. This idea is analogous to other forms of situational self-control, in which people choose or create situations that promote desirable choices, like leaving a distracting cell phone at home when studying at the library (Duckworth, Gendler, & Gross, 2016).

In this vein, individuals with high trait self-control rely on healthy habits to reach their goals (Galla & Duckworth, 2015), which may involve creating contexts that cue desirable behaviors (Wood & Rüniger, 2016). Similarly, people might create contexts that cue desirable identities for reaching their long-term goals. In this manner, the flexibility of identity need not undermine self-regulation but can instead be incorporated into the IVM and utilized for self-regulation.

Second, the IVM can acknowledge potential boundary conditions in which identity may not be adaptive for long-term self-regulation. For instance, when people want to attain a particular identity, this “self-defining goal” can interfere with their pursuit of more concrete outcomes they desire (Gollwitzer et al., 2009; Gollwitzer & Wicklund, 1985; Wicklund & Gollwitzer, 1982). In other cases, identities may add value to unhealthy choices (Guendelman et al., 2011). The IVM could delineate which types of identity-based value are beneficial versus harmful for self-regulation and consider how to strengthen positive types. Here, the flexibility of identity offers a potential solution, rather than a challenge: Interventions can activate alternate identities that promote more adaptive behavior.

In sum, we applaud the aim of the IVM in merging identity and value in the brain. The IVM offers an important step toward specifying the computations underlying identity-based motivation and provides insight into interventions that can promote self-regulation. We believe that both of these aims can be strengthened by accounting for the multiplicity of selves introduced by social identity.

### References

- Abrams, D., Wetherell, M., Cochrane, S., Hogg, M. A., & Turner, J. C. (1990). Knowing what to think by knowing who you are: Self-categorization and the nature of norm formation, conformity and group polarization. *British Journal of Social Psychology*, 29(2), 97–119.
- Akerlof, G. A., & Kranton, R. E. (2000). Economics and identity. *The Quarterly Journal of Economics*, 115(3), 715–753.
- Ashmore, R. D., Deaux, K., & McLaughlin-Volpe, T. (2004). An organizing framework for collective identity: Articulation and significance of multidimensionality. *Psychological Bulletin*, 130(1), 80–114.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497.
- Branscombe, N. R., Ellemers, N., Spears, R., & Doosje, B. (1999). The context and content of social identity threat. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity* (pp. 35–58). Oxford, UK: Blackwell.
- Braun, O. L., & Wicklund, R. A. (1989). Psychological antecedents of conspicuous consumption. *Journal of Economic Psychology*, 10(2), 161–187.
- Brewer, M. B. (1988). A dual process model of impression formation. In T. K. Srull & R. S. Wyer (Eds.), *Advances in social cognition* (pp. 1–36). Hillsdale, NJ: Erlbaum.
- Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17(5), 475–482.
- Brewer, M. B., & Gardner, W. (1996). Who is this “we”? Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, 71(1), 83–93.
- Chib, V. S., Rangel, A., Shimojo, S., & O'Doherty, J. P. (2009). Evidence for a common representation of decision values for dissimilar goods in human ventromedial prefrontal cortex. *Journal of Neuroscience*, 29(39), 12315–12320.
- Cikara, M., Jenkins, A. C., Dufour, N., & Saxe, R. (2014). Reduced self-referential neural response during intergroup competition predicts competitor harm. *NeuroImage*, 96, 36–43.

- Clithero, J. A., & Rangel, A. (2013). Informatic parcellation of the network involved in the computation of subjective value. *Social Cognitive and Affective Neuroscience*, 9(9), 1289–1302.
- Cohn, A., Fehr, E., & Maréchal, M. A. (2014). Business culture and dishonesty in the banking industry. *Nature*, 516(7529), 86–89.
- Correll, J., & Park, B. (2005). A model of the ingroup as a social resource. *Personality and Social Psychology Review*, 9(4), 341–359.
- Cruwys, T., Platow, M. J., Angullia, S. A., Chang, J. M., Diler, S. E., Kirchner, J. L., & Wadley, A. L. (2012). Modeling of food intake is moderated by salient psychological group membership. *Appetite*, 58(2), 754–757.
- De Cremer, D., & Van Vugt, M. (1999). Social identification effects in social dilemmas. *European Journal of Social Psychology*, 29(7), 871–893.
- Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2016). Situational strategies for self-control. *Perspectives on Psychological Science*, 11(1), 35–55.
- Galla, B. M., & Duckworth, A. L. (2015). More than resisting temptation: Beneficial habits mediate the relationship between self-control and positive life outcomes. *Journal of Personality and Social Psychology*, 109(3), 508–525.
- Gollwitzer, P. M., Sheeran, P., Michalski, V., & Seifert, A. E. (2009). When intentions go public does social reality widen the intention-behavior gap? *Psychological Science*, 20(5), 612–618.
- Gollwitzer, P. M., & Wicklund, R. A. (1985). Self-symbolizing and the neglect of others' perspectives. *Journal of Personality and Social Psychology*, 48(3), 702–715.
- Guendelman, M. D., Cheryan, S., & Monin, B. (2011). Fitting in but getting fat: Identity threat and dietary choices among U.S. immigrant groups. *Psychological Science*, 22(7), 959–967.
- Hackel, L. M., Coppin, G., Wohl, M. J. A., & Van Bavel, J. J. (2017). *From groups to grits: Social identity shapes evaluations of food pleasantness*. Manuscript submitted for publication.
- Hackel, L. M., Zaki, J., & Van Bavel, J. J. (in press). Social identity shapes social valuation: Evidence from prosocial behavior and vicarious reward. *Social Cognitive and Affective Neuroscience*. doi: 10.1093/scan/nsx045
- Hare, T. A., O'Doherty, J., Camerer, C. F., Schultz, W., & Rangel, A. (2008). Dissociating the role of the orbitofrontal cortex and the striatum in the computation of goal values and prediction errors. *Journal of Neuroscience*, 28(22), 5623–30.
- Hogg, M. A. (2000). Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. *European Review of Social Psychology*, 11(1), 223–255.
- Kable, J. W., & Glimcher, P. W. (2009). The neurobiology of decision: Consensus and controversy. *Neuron*, 63(6), 733–745.
- Kramer, R. M., & Brewer, M. B. (1984). Effects of group identity on resource use in a simulated commons dilemma. *Journal of Personality and Social Psychology*, 46(5), 1044–1057.
- Kringelbach, M. L. (2005). The human orbitofrontal cortex: Linking reward to hedonic experience. *Nature Reviews Neuroscience*, 6(9), 691–702.
- Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. L. W., Pennekamp, S. F., Doosje, B., & Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology*, 95(1), 144–165.
- Levy, D. J., & Glimcher, P. W. (2012). The root of all value: A neural common currency for choice. *Current Opinion in Neurobiology*, 22(6), 1027–1038.
- McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, 5(2), 100–122.
- Oyserman, D., Fryberg, S. A., & Yoder, N. (2007). Identity-based motivation and health. *Journal of Personality and Social Psychology*, 93(6), 1011–1027.
- Packer, D. J., & Van Bavel, J. J. (2014). They dynamic nature of identity: From the brain to behavior. In N. R. Branscombe & K. Reynolds (Eds.), *The psychology of change: Life contexts, experiences, and identities* (pp. 225–245). Oxford, UK: Psychology Press.
- Peters, J., & Büchel, C. (2010). Neural representations of subjective reward value. *Behavioural Brain Research*, 213(2), 135–41.
- Platow, M. J., Haslam, S. A., Both, A., Chew, I., Cuddon, M., Goharpey, N., & Grace, D. M. (2005). “It’s not funny if they’re laughing”: Self-categorization, social influence, and responses to canned laughter. *Journal of Experimental Social Psychology*, 41(5), 542–550.
- Rand, D. G., Pfeiffer, T., Dreber, A., Sheketoff, R. W., Wernerfelt, N. C., & Benkler, Y. (2009). Dynamic remodeling of in-group bias during the 2008 presidential election. *Proceedings of the National Academy of Sciences of the United States of America*, 106(15), 6187–6191.
- Rangel, A., Camerer, C., & Montague, P. R. (2008). A framework for studying the neurobiology of value-based decision making. *Nature Reviews Neuroscience*, 9(7), 545–556.
- Ruff, C. C., & Fehr, E. (2014). The neurobiology of rewards and values in social decision making. *Nature Reviews Neuroscience*, 15(8), 549–562.
- Seger, C. R., Smith, E. R., & Mackie, D. M. (2009). Subtle activation of a social categorization triggers group-level emotions. *Journal of Experimental Social Psychology*, 45(3), 460–467.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–48). Monterey, CA: Brooks/Cole.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Cambridge, MA: Basil Blackwell.
- Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, 20, 454–463.
- Van Bavel, J. J., & Cunningham, W. A. (2009). Self-categorization with a novel mixed-race group moderates automatic social and racial biases. *Personality & Social Psychology Bulletin*, 35(3), 321–335.
- Van Bavel, J. J., Packer, D. J., & Cunningham, W. A. (2008). The neural substrates of in-group bias: A functional magnetic resonance imaging investigation. *Psychological Science*, 19(11), 1131–1139.
- Varnum, M. E. W., Shi, Z., Chen, A., Qiu, J., & Han, S. (2014). When “your” reward is the same as “my” reward: Self-construal priming shifts neural responses to own vs. friends' rewards. *NeuroImage*, 87, 164–169.
- Wicklund, R. A., & Gollwitzer, P. M. (1982). *Symbolic self completion*. Hillsdale, NJ: Routledge.
- Wills, J., Hackel, L. M., & Van Bavel, J. J. (2017). *Shifting prosocial intuitions: Neurocognitive evidence for a value based account of group-based cooperation*. Manuscript submitted for publication.
- Wood, W., & Rünger, D. (2016). Psychology of habit. *Annual Review of Psychology*, 67(1), 289–314.
- Xiao, Y. J., Coppin, G., & Van Bavel, J. J. (2016). Perceiving the world through group-colored glasses: A perceptual model of intergroup relations. *Psychological Inquiry*, 27(4), 255–274.
- Zaki, J., López, G., & Mitchell, J. P. (2014). Activity in ventromedial prefrontal cortex co-varies with revealed social preferences: Evidence for person-invariant value. *Social Cognitive and Affective Neuroscience*, 9(4), 464–469.
- Zaki, J., & Mitchell, J. P. (2011). Equitable decision making is associated with neural markers of intrinsic value. *Proceedings of the National Academy of Sciences of the United States of America*, 108, 19761–19766.
- Zaki, J., Schirmer, J., & Mitchell, J. P. (2011). Social influence modulates the neural computation of value. *Psychological Science*, 22(7), 894–900.