POSTMODERNISM AND THE SELF: HOW SOCIAL SATURATION INFLUENCES

WHO WE THINK WE ARE

A Dissertation

by

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ABSTRACT

The current research examined the role that social saturation plays in people's beliefs about the self. Specifically, the current studies examined whether "social saturation" predicts the belief that people have multiple selves (as opposed to one single true self). It was hypothesized that greater social saturation would lead to greater belief in multiple selves and that this relationship would be mediated by reduced self-reflection and increased perceived stress. A preliminary survey study (Study 1) using an adult non-college student sample supported these predictions, showing that individual differences in social saturation positively predicted belief in multiple selves and that this relationship was mediated by self-reflection and perceived stress. However, exploratory analyses revealed that the relationship between social saturation and belief in multiple selves became nonsignificant when controlling for perceived stress, suggesting that perceived stress was driving this relationship. Two experimental studies (Studies 2 and 3) using college students directly manipulated the objective context (high social saturation vs. low social saturation), and revealed that the objective context of saturation did not result in the subjective experience of saturation (i.e., overload). Trends in the data revealed that participants in the high social saturation (vs. low social saturation) condition actually reported less belief in multiple selves (Study 2), less self-alienation and more self-concept clarity (Study 3). Exploratory analyses revealed that both experimental studies showed a similar pattern to the analyses in Study 1, such that greater perceived stress was related to greater belief in multiple selves. Implications of both social saturation and

stress for self-beliefs are discussed.

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INTRODUCTION AND

LITERATURE REVIEW

"With every day, and from both sides of my intelligence, the moral and the intellectual, I thus drew steadily nearer to the truth, by whose partial discovery I have been doomed to such a dreadful shipwreck: that man is not truly one, but truly two."

– Stevenson, p. 79

In Robert Louis Stevenson's novel, *The Strange Case of Dr. Jekyll and Mr. Hyde* (1886), Dr. Jekyll ingests a potion that turns him into his alter self, Mr. Hyde. This alter self (i.e., the "evil" self), allows Dr. Jekyll to explore an alternate self, engaging in hedonistic crimes while still remaining a respectable, law-abiding man as Mr. Jekyll (his "good" self). This undertaking of dual selves eventually reaches a point where Dr. Jekyll's "true" self becomes less clear as the self of Mr. Hyde starts to eclipse that of Dr. Jekyll. The novel is an early exploration of the theme that personality may consist of multiple selves, rather than one true and authentic self.

One contemporary theory suggests that the advent of technology has similarly changed how we conceptualize our self-concepts (Gergen, 1991). Specifically, Gergen argues that we are moving into an age of the "postmodern self," in which the self is fractured into multiple versions because of our immersion in a technological environment that fosters constant connection to others and exposure to a multitude of alternative options for being. This "populating the self" (p. 68, Gergen, 1991) results in the obsolescence of the popular notion of a single "true" self-concept (Kernis &

Goldman, 2006). Gergen (1991) terms this new multiplicitous self, the "saturated self," and describes it as a self characterized by constant connection to others that is absorbing a multitude of (sometimes contradictory) voices and taking in a seemingly endless stream of information. This saturation erodes the notion of the self-concept as singular, true, or authentic, and instead, gives way to a self consisting of multiple selves.

While compelling, Gergen's ideas have not thoroughly been empirically investigated. The proposed studies seek to address this gap in the literature. Specifically, the current research seeks to (1) operationalize the concept of social saturation, (2) establish a relationship between social saturation and belief in multiple selves, (3) experimentally manipulate people's perceived levels of social saturation to better examine causality, and (4) examine self-reflection and perceived stress as factors that may mediate the proposed relationship between social saturation and belief in multiple selves.

Self-Beliefs Through Time

It is important to examine the lay theories that people hold about the nature of the self-concept because these lay theories have powerful psychological implications. For example, people's belief in a single "true" self seems to have important consequences for well-being (Kernis & Goldman, 2006; Schlegel & Hicks, 2011). Levels of perceived true self-knowledge (assessed through both self-report and experimental manipulation) predict important well-being outcomes (Kernis and Goldman, 2006; Lakey, Kernis, Heppner, & Lance, 2007; Schlegel & Hicks, 2011) such as self-actualization, vitality, mindfulness, self-esteem, active coping (Kernis &

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Goldman, 2006), and decreased verbal defensiveness (Kernis & Goldman, 2006; Lakey et al., 2007). Studies have also shown that simply thinking about one's true self confers psychological benefits such as greater self-esteem (Andersen & Williams, 1985; Arndt & Schimel, 2003), less conformity (Arndt, Schimel, Greenberg, & Pyszcynski, 2002), greater self-determination and less psychological defensiveness (Arndt et al., 2002; Schimel, Arndt, Pyscynski, & Greenberg, 2001), and less self-handicapping (Arndt et al., 2002; Schimel, Arndt, Banko, & Cook, 2004). Further, true self-knowledge and expression have been linked to feelings of meaning in life (e.g., Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Debats, Drost, & Hansen, 1995; McGregor & Little, 1998; Schlegel, Hicks, King, & Arndt, 2011; Sheldon & Elliot, 1999; Sheldon & Hauser-Marko, 2001), even when the true self is simply made cognitively accessible (Schlegel, Hicks, Arndt, & King, 2009).

What is surprising about all of these findings regarding true self-knowledge and expression is that these effects exist for a self-concept that is not empirically verifiable. As Waterman (1984) has suggested, the true self is an abstraction that can never be observed or measured directly. Further, the supposition that people literally possess a single "true self" is tenuous at best (e.g., Baumeister, 1995) and is challenged by a wealth of theoretical (e.g., Cooley, 1902; James, 1890; Sullivan, 1953) and empirical (e.g., Andersen & Chen, 2002; Darley & Fazio, 1980; Drigotas, Rusbult, Wieselquist & Whitton, 1999; Murray, Holmes & Griffin, 1996) perspectives that point to the pervasive influence of environment on the self-concept. Why then is this potentially illusory self-concept able to confer such a robust set of positive influences on well-being? The

answer likely lies in the beliefs that surround the true self and its existence (e.g., Schlegel, Vess, & Arndt, 2012). This speaks to the psychological power of lay theories about the self.

Another reason it is important to study lay theories about the self is because they change over time. The true self serves as an example of this. Specifically, belief in a single true self seems to hold some importance today (as evidenced by the findings above), however, this has not always been the case and may not be in the future. Belief in a true self seems to be rooted in modern times (i.e., the eighteenth and nineteenth centuries; Gergen, 1991), and before that, was not something that people were concerned with. It was not until the 16th century, when people began to show concern with others' deception, that the self was thought of something that was "within" and hidden from public view. Before this time, people equated the self with what was outward and easily observable to others. This shift in believing in a distinction between a public self and a private self may have stemmed from people's recognition that others had hidden selves. That is, concern with knowing the inner selves of others became concern with knowing one's own self. Other potential explanations for the emerging concern over the hidden self include the Puritans' self-scrutiny over whether they were predestined to go to hell or not, the Victorians' concern with involuntary disclosure, and the influence of early psychologists such as Freud, who perpetuated the notion that one's inner self is composed of hidden drives and impulses (Baumeister, 1987).

People's progression toward a belief in a true self may also be explained by the drive to fulfill specific needs (e.g., need for meaning, as reviewed above). In medieval

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times, meaning was given to people through agreed-upon values of religion and tradition. However, this gave way to beliefs in growth and change as people abandoned Christianity in modern times. Without religion to dictate values, people had to find their own moral guide, which resulted in frustration and hostility directed at society. People emphasized individual fulfillment in their private lives as a way of escaping the perceived oppression of society. However, as communications media and economic interdependence became prevalent, society moved into the postmodern era, in which people became more immersed in society, moving further away from individuality and personal fulfillment (Baumeister, 1987). Gergen's "social saturation" theory (1991) supports Baumeister's (1987) assessment of the postmodern era as one that does not support individuality and fulfillment, asserting that "social saturation brings with it a general loss of true and knowable selves" (p. 16). Given that this loss of belief in a true self theorized to be driven by contextual factors such as technological immersion, it stands to reason that social saturation may be directly related to the belief that we possess multiple, contextually-dependent selves (as opposed to a singular true self).

Technology and the Self-Concept

As discussed above, historical context influences the way people think about the nature of the self. Consistent with this notion, Gergen hypothesizes that a shift is occurring in which people's near-constant immersion in a technological context influences the way they think about the self by allowing them to choose who they want to be from endless options. That is, since we are exposed to an endless stream of information through the internet, television, etc., we see and absorb people's behavior,

allowing us to choose who to be from among these options. Although Gergen predicted this shift back in 1991, this shift is even more pronounced today as technology continues to permeate our lives.

Today's technology has become a major outlet for people to create and experiment with multiple selves. Through mediums such as the internet and video games, people are able to construct idealized versions of who they are by selectively representing various aspects of their selves (e.g., self-promotion on the internet; Buffardi & Campbell, 2008). For example, people report that they create online avatars in order to represent idealized versions of their self (Bessière, et al., 2007; Duchenaut, Wen, Yee, & Wadley, 2009). Klimmt and colleagues (2009) similarly argue that people strive to achieve their idealized self by "filling in" a role of a character (e.g., as the hero/heroine; Klimmt, Hefner, & Vorderer, 2009). The concept of "filling in" refers a person incorporating characteristics of a character into their self-concept (at least temporarily), thus reducing discrepancies between one's actual self and ideal self.

Further, it is not uncommon for people to create several different selves on the internet and in video games, one to fit each role or context. For example, Turkle (1995) explored self expression and creation on multiple user domains (MUDS; popular in the 1970s and 1980s). MUDS are virtual spaces in which people create one or more characters and navigate a virtual space and interact with other characters through these characters. People control their characters and converse with other characters through text commands and only know others through character names; real identities are kept anonymous. Through these MUDS, people are able to create multiple selves unlike their

real life self or express aspects of their real self that they feel unable to express in real life. This self-flexibility, Turkle (1995) argues, actively subverts the traditionalist notion of an authentic (i.e., true) self, resulting in a postmodern self that can be multiplied endlessly (an argument very similar to Gergen's).

Consistent with the idea that technology facilitates the flexibility of the self, empirical studies have shown that internet interactions (compared to face-to-face interactions) allow for different forms of self-expression and make different self-concepts more accessible (e.g., Bargh, McKenna, & Fitzsimons, 2002). Groups that people participate in online can also become important parts of one's self-concept (e.g., Davidson, Pennebaker, & Dickerson, 2000). For example, McKenna & Bargh, 1998 found that members of a virtual group devoted to a marginalized-concealable part of the self (e.g., homosexuality, deviant sex interests) considered the group a more important part of their self-concept and were more influenced by norms of group membership compared to members of mainstream groups (e.g., politics, TV) or marginalized-conspicuous virtual groups (e.g., obesity, stuttering). Furthermore, members of a marginalized-concealable group who felt that the group was important to their self felt greater self-acceptance and were more likely to share their secret self with family and friends.

Taken together, this research suggests that the self is subject to change depending on the context, and that technology facilitates the exploration and creation of multiple selves. Gergen (1991) argues that with increasing technology, we reach an exaggerated version of this process and reach a point in which there are too many possibilities for

selves, leading to an overly populated and "saturated" self.

Social Saturation

Gergen (1991) describes the saturated self as one that is characterized by multiplicity, fragmentation, and incoherence. This is due to the splitting of the self into a multitude of options, which Gergen terms "multiphrenia." That is, we establish multiple selves through absorption of the multiple voices of people in our lives, either in real life or through the media. People then internalize these different selves, thus creating a seemingly endless pool of selves that they can choose to draw upon depending on the needs of the current situation. This makes choosing a single voice or self an increasingly difficult task. Gergen (1991) argues that:

> Emerging technologies saturate us with the voices of humankind – both harmonious and alien. As we absorb their varied rhymes and reasons, they become part of us and we of them. Social saturation furnishes us with a multiplicity of incoherent and unrelated languages of the self. For everything we "know to be true" about ourselves, other voices within respond with doubt and even derision. This fragmentation of self-conceptions corresponds to a multiplicity of incoherent and disconnected relationships. These relationships pull us in myriad directions, inviting us to play such a variety of roles that the very concept of an "authentic self" with knowable characteristics recedes from view. The fully saturated self becomes no self at all. (p. 6-7).

Gergen (1991) gives the example of a person that is confronted with divorce and suggests that he or she will not be shocked or unable to react. Instead, this person will have an endless stream of actions to choose from based on what he or she has seen played out either in real life or by characters on television or in movies. This overabundance of possible selves threatens the notion of a single, consistent self because there is nothing that distinguishes a person's own viewpoints from others (i.e., other voices and viewpoints are absorbed as one's own). As people become more socially

saturated, they simply become imitations of others.

Empirical research has only very limitedly examined the construct of social saturation or its implications. However, the research that does exist finds support for Gergen's ideas. For example, Ovadia (2003) explored Gergen's (1991) specific contention that the saturated self has an increased number and diversity of values that it deems important. A values survey that was given to high school seniors in the U.S. between 1976 and 1996 revealed that the importance of most values on the survey increased, with only one value (finding meaning in life) decreasing in importance. That the average perceived importance of all but one of the values increased over time is consistent with Gergen's notion that the saturated self deems an increasingly diverse set of values as important.

Of particular relevance to the current studies, Dunn and Castro (2012) provided some initial evidence for the relationship between social saturation and the belief in multiple selves. Specifically, they found that people who use technology more often report higher levels of self-pluralism. While this finding does provide initial evidence for the implications of social saturation for lay theories of the self, this research is limited by the fact that this study is entirely correlational in nature. Thus, we are unable to make any causal conclusions about the nature of the relationship. Perhaps people high in self-pluralism are simply more interested in using technology because it is a vehicle for expressing multiple selves.

Another potential issue is Dunn and Castro's (2012) conceptualization of a saturated self. By operationalizing social saturation as higher levels of technology usage

(specifically levels of TV viewing, internet use, video game exposure, and general computer use), it can be argued that their study simply shows that higher technology usage is related to self-pluralism (vs. *social saturation* is related to self-pluralism). I explore this issue in the next section.

Overview of Studies

Operationalization of the construct of social saturation is a thorny issue. As specified in the previous sections, "social saturation" is broadly defined as a self that is saturated with endless voices and ways of being that are absorbed through our constant connections with others. When social saturation is defined in this way, it is unclear whether saturation is the subjective feeling of stress that results from a highly saturated environment or simply the objective experience of a highly saturated environment (as Dunn & Castro operationalized it).

I argue that Gergen's (1991) notion of a saturated self is best conceptualized as the subjective experience of information overload (vs. the objective experience of a saturated environment). Information overload is a form of stress that people experience when external demands exceed their capacity to handle them (Lipowski, 1975). This conceptualization of information overload seems particularly relevant to the notion of social saturation, given Gergen's (1991) description of the saturated self as a "multiphrenic condition, in which one begins to experience the vertigo of unlimited multiplicity" (p. 49). This suggests that it may not be simply exposure to technology, but the feeling of overload that results in a socially saturated condition. Further, descriptions of the saturated condition support the idea that a saturated self is stressed. Gergen argues

that options are not only endless, but are no longer constrained by time or distance, and because of this, "daily life has become a sea of drowning demands, and there is no shore in sight" (p. 75). Gergen (1991) gives a particularly compelling example of how social saturation makes even a seemingly simple dilemma such as, "what should I do today?" into something complex and stressful by describing a man contemplating what to do with his free Saturday. The man starts his day excited about having the freedom to choose how he spends his time. He starts to think about what to do with the day, which turns into thinking about things that need to be done, which leads him to think of more things that he needs to do, which reminds him of other things he would like to do. His sense of having a free day has become completely overwhelming with all the options and obligations. Further, because of technology, these options are all available immediately, which lead to an endlessly expansive list of things to do. This endlessly overwhelming list of potentials, Gergen argues, is what the state of social saturation is like.

Based on the description above, it seems reasonable to believe that the objective environment of technological immersion fosters the subjective condition of saturation. This would explain why Dunn and Castro's (2012) operationalization of social saturation was related to self-pluralism. However, the question of whether the objective state of saturation predicts the subjective experience of overload is ultimately an empirical one and the current studies seek to address this issue. First, I conducted an initial investigation into whether a relationship exists between *subjective* social saturation and belief in multiple selves (Study 1). I then conducted two experimental studies that

manipulated participants' objective contexts in order to examine whether this would elicit corresponding shifts in participants subjective experiences of saturation.

Mediators

In addition to exploring the potential relationship between social saturation and belief in multiple selves, I also explored decreased self-reflection and increased perceived stress as potential mediators. Given Gergen's (1991) description of a saturated self as one that is overwhelmed by potentials, this implies that the state of social saturation is one in which people do not have time to self-reflect and experience greater perceived stress.

Self-reflection is characterized as private self-attentiveness motivated by "curiosity or epistemic interest in the self" (Trapnell & Campbell, 1999). Misra & Stokols (2012) found that higher levels of overload predicted less time devoted to engaging in contemplative activities, suggesting that higher social saturation may lead to less self-reflection. Additionally, Cohen (1980) argues that information overload increases demands on attentional capacity, suggesting that increased social saturation may lead to a lesser capacity for self-reflection. That is, if people feel overloaded with technological connection, they may not have time or interest in self-reflection, which may make it more difficult for them to integrate self-aspects into a single coherent self.

Perceived stress may be another mediator of the relationship between social saturation and belief in multiple selves. If people do indeed experience "the vertigo of unlimited multiplicity" (p. 49; Gergen, 1991) when saturated, it stands to reason that this would be a stressful experience. Misra and Stokols (2012) support this notion, showing

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that people who experienced greater cyber-based and place-based overload (i.e., stress in these specific domains) experienced greater perceived general stress (i.e., more generalized stress). This suggests that overload (and therefore, potentially social saturation) in both cyber and place-based domains is an overwhelming, stressful experience that bleeds into a more generalized experience of stress. This may lead to greater belief in multiple selves due to preoccupation with stressful experiences which may make it difficult for people to think about who they really are. Similar to saturation's predicted relationship with self-reflection, experiencing high levels of perceived stress may make it difficult for people to consolidate multiple self-aspects into a single self.

To summarize, my hypotheses are as follows:

- (H1) Subjective social saturation will be positively related to greater belief in multiple selves (Study 1).

- (H2) Increasing the salience of social saturation through an objectively saturated context will elicit a shift in participants' subjective experience of saturation (Studies 2 and 3).

- (H3) Participants in the high social saturation conditions (vs. low social saturation conditions) will report greater belief in multiple selves (Studies 2 and 3).

- (H4) Self-reflection will mediate the relationship between social saturation and belief in multiple selves (Studies 1, 2 and 3).

- (H5) Perceived stress will mediate the relationship between social saturation and belief in multiple selves (Studies 1, 2, and 3).

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CHAPTER II

STUDY 1

Study 1 served as an initial assessment of whether a relationship exists between subjective social saturation and belief in multiple selves. It was expected that greater feelings of social saturation would lead to greater feelings of general perceived stress and less self-reflection, which would, in turn, result in greater belief in multiple selves. To test this prediction, participants completed measure of subjective social saturation (i.e., overload) as well as measures of self-reflection, perceived stress, and belief in multiple selves.

Participants

Sixty-eight (41 female) individuals recruited from Amazon's Mechanical Turk (MTurk) platform participated in the study and were compensated with a payment of $0.50. As a participant source, MTurk has been shown to be equally (or more) representative and reliable as college students in previous research (Buhrmester, Kwang & Gosling, 2011). Participants were from the United States and were diverse in age ($M = 36.22$, $SD = 14.57$, range 18-72). Reported racial/ethnic backgrounds included: 80.9% European American, 7.4% African American/Black, 5.9% more than one race, 4.4% Asian American, and 1.5% Hispanic/Latino.

Materials and Procedure

Participants completed the study through an online survey after accepting the job posting on Amazon MTurk. Participants completed the measures described below, as well as several unrelated measures outside the scope of the current report.

Social saturation. Social saturation was assessed using a 32-item scale based on the Perceived Information Overload Scale (Misra & Stokols, 2012), which included both cyber-based and place-based sources of overload. This scale included items from the Perceived Information Overload Scale in addition to several items about social media and additional items assessing people's subjective experience of overload (all items are presented in the Appendix). For each item, participants indicated how often they felt or thought a certain way using a 5-point scale (1 = *never*; 5 = *very often*). Example items included, "In the last month, how often have you felt that you have too many messages (e.g., wall postings, event notifications, personal messages, status updates, and applications) on your Facebook?" and "In the last month, how often have you felt that the demands on you in your work place exceeded your capacity to deal with them?" Responses were averaged to create a composite social saturation score (*M* = 2.23, *SD* = .69, α = .94).[1]

Self-reflection. Self-reflection was assessed using the 20-item Self-Reflection and Insight Scale (SRIS; Grant, Franklin, & Langford, 2002). Participants indicated their agreement with statements such as, "I frequently take time to reflect on my thoughts" and "It is important for me to evaluate the things that I do" on a 5-point scale (1 =

strongly disagree; 5 = *strongly agree).* Responses were averaged to create a composite reflection score (M = 2.48, SD = .88, α = .95).

Perceived stress. Perceived stress was assessed using the 14-item Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). Participants indicated their agreement with statements such as, "In the last month, how often have you been upset because of something that happened unexpectedly?" and "In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?" on a 5-point scale (1 = *never;* 5 = *very often*). Responses were averaged to create a composite perceived stress score (M = 2.71, SD = .59, α = .82).

Self beliefs. Participants completed three measures in order to assess their belief in multiples selves. First, they completed a measure of belief in multiple selves by indicating their agreement with three statements: "People have multiple 'true' selves, each representing a different role," "I have multiple selves I can draw qualities from depending on the situation," and "Who I am depends on the environment I'm in" using a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree).* Responses were averaged to create a composite belief in multiple selves score (M = 2.78, SD = 1.03, α = .86).

Next, participants completed the 30-item Self-Pluralism Scale (SPS-10; McReynolds, Altrocchi, & House, 2000). Participants indicated their agreement with statements such as, "I act and feel essentially the same way whether at home, at work, or with friends" and "Sometimes I feel like two (or more) persons under the same skin" using a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree).* Responses were averaged to create a composite self-pluralism score (M = 2.34, SD = .67, α = .93).

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Finally, participants completed the 8-item behavioral change subscale of the Dialectical Self Scale (DSS; Spencer-Rodgers, Srivastava, Boucher, English, Paletz, & Peng, 2010). Participants indicated their agreement to statements such as, "I often change the way I am, depending on who I am with" and "I sometimes find that I am a different person by the evening than I was in the morning" using a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). Responses were averaged to create a behavioral change subscale (*M* = 3.24, *SD* = .1.05, α = .80).

Given that the belief in multiple selves scale was very highly correlated with the Self-Pluralism Scale (*r* = .93, *p* < .001) and the behavioral change subscale of the DSS (*r* = .94, *p* < .001), and the Self-Pluralism scale was significantly correlated with the behavioral change subscale of the DSS (*r* = .87, *p* < .001), I standardized each composite variable and formed an overall composite belief in multiple selves score.[2]

Results and Brief Discussion

Bivariate correlations between all study variables are presented in Table 1.

As predicted, greater social saturation was associated with greater perceived stress, less self-reflection, and greater belief in multiple selves. This suggests that the subjective feeling of social saturation is a stressful experience in which people are less self-reflective, and this subjective experience is related to greater beliefs in multiple selves.

In order to examine self-reflection and perceived stress as mediators of the relationship between social saturation and belief in multiple selves, bootstrapping analyses (Preacher & Hayes, 2008) were conducted in which the number of bootstrap

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Table 1 Correlations among variables in Study 1

	1	2	3	4
1. Social Saturation	-	-.30*	-.54*	.42*
2. Self-Reflection		-	.33*	-.34*
3. Perceived Stress			-	.60*
4. Belief in Multiple Selves Composite				-

Note. $^*p < .05$.

samples was set to 5,000 and 95% confidence intervals for the bias corrected indirect effects were computed. Results indicated that when self-reflection and perceived stress were included in the model as mediators, the size of the effect of social saturation on belief in multiple selves (total effect = .38, $p < .001$) decreased (direct effect = .10, p = .33), a pattern that is consistent with mediation. Further, the indirect effect of social saturation on belief in multiple selves through self-reflection and perceived stress was significant, as a 95% confidence interval around the indirect effect did not include zero (CI = .14, .46). Given that the direct effect became non-significant with the mediators included, this suggests full mediation (see Figure 1).

Exploratory analyses were also conducted in order to investigate whether the effect of social saturation on belief in multiple selves was moderated by age. Specifically, a regression analysis was conducted to examine social saturation, age, and their potential interaction on belief in multiple selves. All variables were standardized and the product of the standardized social saturation and age scores was used as the interaction term (Aiken & West, 1993). The main effect for saturation was significant (β = .40, p = .001), however the main effect for age was not (β = -1.39, p = .17). Further, the interaction between social saturation and age was not significant (β = -.05, p = .66), indicating that levels of social saturation did not interact with age of participants to predict belief in multiple selves.

Further exploratory analyses were conducted examine whether increased belief in multiple selves was simply due to increased general stress, rather than saturation per se. Specifically, a regression was conducted where all variables were standardized and

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Figure 1. Self-reflection and perceived stress fully mediate the relationship between social saturation and belief in multiple selves, Study 1.

social saturation and perceived stress were entered simultaneously. Results showed that

when perceived stress was controlled for (β = .48, p < .001), social saturation no longer

social saturation and perceived stress were entered simultaneously. Results showed that

when perceived stress was controlled for (β = .48, p < .001), social saturation no longer

predicted belief in multiple selves (β = .12, p = .25), suggesting that that relationship

between social saturation and belief in multiple selves may be driven by general

perceived stress, rather than saturation per se.

Study 1 provided initial evidence that greater social saturation (operationalized as the subjective experience of overload) is associated with greater belief in multiple selves. Further, these results suggest that the specific stress of being socially saturated decreases self-reflection and increases general perceived stress, resulting in greater belief in multiple selves. However, further exploratory analyses suggested that the results may be driven primarily by general perceived stress. This suggests that social saturation may be something that simply contributes to people's overall feelings of stress and that stress influences belief in multiple selves (as opposed to a more direct relationship between social saturation and belief in multiple selves).

However, given that this study is correlational in nature, inferences about causality cannot be made. Also, given the similarity of the social saturation and perceived stress measures used in this study, it is difficult to separate the two constructs since both assess subjective feelings of being hassled or overwhelmed. As such, Studies 2 and 3 attempted to (1) conceptually replicate these results by experimentally manipulating social saturation and (2) better isolate social saturation from general stress in order to examine *social saturation's* effect (vs. *perceived stress's* effect) on belief in multiple selves.

CHAPTER III

STUDY 2

Study 2 attempted to manipulate social saturation through a "calendar task" in which participants either detailed every activity that they engage in on a typical weekday (high social saturation) or detailed activities that they would plan on engaging in on a vacation in which they "unplug" (low social saturation). It was expected that manipulating participants' perceptions of objective experiences of saturation would influence participants' subjective feelings of overload (i.e., the types of feelings participants in Study 1 reported). Thus, I predicted that participants in the high social saturation condition (vs. low social saturation condition) would report greater belief in multiple selves. Further, we expected that this relationship would be mediated by state self-reflection and perceived stress.

We additionally assessed self-concept clarity in order to examine whether social saturation influences how well participants feel like they know who they are. Part of Gergen's (1991) theory is that "social saturation brings with it a general loss in our assumption of true and knowable selves" (p. 16), which suggests that high social saturation may decrease participants' feelings of self-knowledge.

Participants

One hundred and twenty-five (88 female) students enrolled in an introductory psychology course at Texas A&M University participated for partial fulfillment of a course requirement. Ages ranged from 18-24 ($M = 18.47$, $SD = .91$). Reported

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racial/ethnic backgrounds included: 64% European American, 8.8% Hispanic/Latino, 2.4% Asian American, 1.6% African American, 0.8% Indian, 0.8% American Indian/Alaska Native, and 21.6% more than one race.

Materials and Procedure

Participants completed a paper questionnaire packet in a classroom. Participants were informed that they would be participating in a study about their self and personality and completed the measures described below.

Manipulation of social saturation. Participants were randomly assigned to one of two conditions: high social saturation or low social saturation. In the high social saturation condition, participants completed a "calendar task" in which they indicated everything that they would do on a typical weekday (24-hour time period), including activities such as technology use. It was expected that having participants fill out the calendar with the numerous activities that they do on a daily basis would increase the salience of the experience of saturation. In the low saturation condition, participants completed the same calendar task, only they indicated everything they would do on a day on vacation (24-hour time period) with no access to technology. It was expected that this low saturation condition would decrease the salience of the experience of saturation. Participants in the high social saturation condition were given the following instructions:

> Please take a moment to imagine your average weekday. What do you do? Where do you go? Using the calendar pages provided below, please indicate everything that you would do throughout the day during each time period. Please do not forget to list things like, "riding the bus to campus," "going on the computer," "talking on the phone," and "texting." We want you to really try to get at what your full experience would be throughout the day, so please try to be as specific/thorough as you possibly can! Also, if you would be engaged in multiple activities at once (e.g., watching TV and texting), please list all of those

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in the box, even if you would not be texting the entire time. For hours that you would spend sleeping, please indicate this with an "X".

Participants in the low social saturation condition were given the following instructions:

> Please take a moment to imagine that you are on vacation on a beautiful tropical island. You are "going off the grid" to get away from it all, which means you have no cell phone signal and no internet connection. Think about what you would like to do while you are on this vacation. Where on the island would you go? What kinds of things would you do? Using the calendar pages provided below, please indicate everything that you would do during your vacation on this island. We want you to really try to get at what your full experience would be throughout a day spent on this vacation, so please try to be as specific/thorough as you possibly can! Also, if you plan to be engaged in multiple activities at once (e.g., reading a book and watching the ocean), please list all of those in the box, even if you wouldn't' be looking at the ocean the entire time. For the hours that you plan to spend sleeping, please indicate this with an "X".

Participants in both conditions were given a "calendar" to fill in their activities during a 24-hour period (see Appendix).

The goal of this manipulation was to induce the same types of feelings of overload reported by participants in Study 1. Thus, we had participants respond to items that were based on the social saturation scale used in Study 1 as a manipulation check. Participants responded to the following questions: "Right now, how compelled do you feel to look at your phone?", "Right now, how compelled do you feel to check your email?", "Right now, how compelled do you feel to update your Facebook, Twitter, message/chat application, etc.?","Right now, how hassled do you feel with all the demands in your school, home, or work environment?", and "Right now, how much do you feel like you are constantly shuffling between activities or demands?". Participants responded to each item using a 5-point scale ($1 = $ *not at all;* $5 = $ *very much*) and responses were averaged to create a composite score for ($M = 2.74$, $SD = .81$, $\alpha = .75$).[3]

State self-reflection. State self-reflection was assessed using an adapted version of the 20-item Self-Reflection and Insight Scale (SRIS; Grant et al., 2002). Participants were given activities such as, "thinking about my thoughts," and "spending time in self-reflection" and asked to indicate (1) how much time they spend engaged in this behavior on a 5-point scale (1 = *no time at all*; 5 = *very much time* and (2) how interested they are in engaging in this behavior on a 5-point scale (1 = *not at all interested*; 5 = *very interested).* Interest in engaging in self-reflection was included in addition to time spent in self-reflection in order to include a more state-oriented (vs. trait-oriented) measure of participants' self-reflection. Specifically, it may be more difficult to influence a report on behavior than on interest in a behavior. Responses were averaged to create two composite state self-reflection scores, one for time engaged in activities (*M* = 3.22, *SD* = .51, α = .77), and one for interest in engaging in activities (*M* = 3.29, *SD* = .56, α = .81).

State perceived stress. Perceived stress was assessed using an adapted version of the 14-item Perceived Stress Scale (PSS; Cohen et al., 1983). Participants indicated their agreement with statements such as, "I feel upset because of something that happened unexpectedly" and "I feel like my difficulties are piling up so high that I cannot overcome them" on a 5-point scale (1 = *strongly disagree;* 5 = *strongly agree*). Responses were averaged to create a composite state perceived stress score (*M* = 2.76, *SD* = .51, α = .71).

Self-concept clarity. Self-concept clarity was assessed using the 12-item Self-Concept Clarity Scale (Campbell, Trapnell, Heine, Katz, Lavallee, & Lehman, 1996). Participants indicated their agreement with statements such as, "My beliefs about myself

often conflict with one another," and "I spend a lot of time wondering about what kind of person I really am" on a 5-point scale (1 = *strongly disagree; 5 = strongly agree*). Responses were averaged to create a composite self-concept clarity score (*M* = 3.56, *SD* = .86, α = .89).

Other measures. Participants also completed the same measures assessing belief in multiple selves that were used in Study 1 (belief in multiple selves (*M* = 2.97, *SD* = .95, α = .77), self-pluralism (*M* = 2.38, *SD* = .58, α = .87), and the behavioral change subscale of the DSS (*M* = 2.35, *SD* = .61, α = .67). Belief in multiple selves scale was significantly correlated with the Self-Pluralism Scale (*r* = .58, *p* < .001) and the behavioral change subscale of the DSS (*r* = .60, *p* < .001), and the Self-Pluralism scale was significantly correlated with the behavioral change subscale of the DSS (*r* = .72, *p* < .001). However, given that the correlations between these variables were not as high as in Study 1, a composite score was not used. [4]

Results and Brief Discussion

Descriptive statistics and *t*-tests for all study variables are reported in Table 2 and bivariate correlations between all study variables are presented in Table 3.

As can be seen in the table, the results for the manipulation check revealed that, contrary to expectations, the manipulation did not result in significant differences in participants' subjective experience of social saturation for either compulsion (*p* = .97) or hassle (*p* = .60). Further, there were no significant differences in perceived stress between conditions (*p* = .68), suggesting that participants did not perceive the high social

Table 2 *t*-tests, means, and standard deviations for all dependent variables, Studies 2 and 3

| | Study 2 | | | | | | Study 3 | | | | | |
| | | | High Saturation | | Low Saturation | | | | High Saturation | | Low Saturation | |
	t	*p*	*M*	*SD*	*M*	*SD*	*t*	*p*	*M*	*SD*	*M*	*SD*
Manipulation Check	0.20	0.85	2.75	0.79	2.72	0.87	0.83	0.41	3.01	0.41	2.93	0.58
Multiple Selves Composite	-1.64	0.10	2.48	0.81	2.66	0.07	-0.57	0.57	2.94	0.64	2.99	0.57
Multiple Selves	-1.21	0.23	2.88	1.00	3.08	0.90	-0.09	0.93	2.94	0.98	2.95	0.96
Self-Pluralism	-1.98	0.05	2.28	0.57	2.47	0.57	-0.95	0.34	2.39	0.57	2.48	0.53
DSS Behavioral Change	-1.22	0.22	2.30	0.63	2.43	0.57	-0.72	0.47	3.49	0.61	3.57	0.60
Time Spent Self-Reflection	-0.34	0.74	3.20	0.50	3.23	0.51	-0.002	1.00	3.27	0.45	3.27	0.48
Interested in Self-Reflection	-1.35	0.18	3.21	0.52	3.34	0.59	-0.11	0.91	3.35	0.44	3.36	0.48
State Stress	0.41	0.68	2.79	0.57	2.76	0.48	0.08	0.94	2.25	0.83	2.23	0.97
Self-Concept Clarity	0.87	0.39	3.63	0.85	3.49	0.87	1.95	0.05	3.66	0.70	3.44	0.69
Positive Mood							0.40	0.69	3.60	0.73	3.55	0.70
Negative Mood							0.22	0.83	1.54	0.59	1.52	0.66
Arousal							0.19	0.85	2.84	0.57	2.82	0.59
Self-Alienation							-1.58	0.12	1.87	0.74	2.09	0.94

Note. df for all variables in Study 2 were 127, except for the manipulation check (*df* = 126); *df* for all variables in Study 3 were 142.

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Table 3 Correlations among variables in Study 2.

	1	2	3	4	5	6	7	8
1. Manipulation Check (Social Saturation)	-	.13	-.03	.29*	-.08	.13	.12	.12
2. Time Engaged in Self-Reflection		-	.59*	.04	-.15	.18*	.05	.15
3. Interest in Self-Reflection			-	-.06	-.26*	.14	.12	.14
4. State Perceived Stress				-	-.46*	.25*	.38*	.25*
5. Self-Concept Clarity					-	-.48*	-.72*	-.55*
6. Belief in Multiple Selves						-	.58*	.58*
7. Self-Pluralism							-	.71*
8. Behavioral Change								-

Note. $^*p < .05$.

saturation condition to be any more saturated or stressful than the low saturation

condition.

Analyses also revealed that the differences between conditions were also non-

significant for most of the dependent variables. However, there were a few trends

observed that were in the *opposite* direction of what we hypothesized. Specifically,

participants in the high social saturation condition reported marginally *less* self-

pluralism than participants in the low social saturation condition ($p = .05$). Trends also

revealed that participants in the high social saturation reported less belief in multiple

selves ($p = .23$) and less behavioral change ($p = .22$) than participants in the low social

saturation condition.

Interestingly, trends revealed that participants were less interested in self-

reflection in the high social saturation condition ($p = .18$)., which may indicate that

participants are not motivated to think very deeply about the self when immersed in this

environment (consistent with Carr's [2010] shallowing hypothesis). However, this effect

did not replicate in Study 3.

All of the other dependent variables reveal small differences between conditions,

but all other differences were in the opposite direction of the hypothesized pattern.

Of course, interpreting any differences between conditions is also complicated by

the fact that the manipulation did not influence subjective saturation (at least as we

assessed it). However, an examination of the correlations (collapsed across conditions)

does allow for a comparison of these results with Study 1 (see Table 3). Results revealed

that the manipulation check (i.e., subjective social saturation) and state perceived stress

were significantly positively correlated. This is consistent with results from Study 1 showing that subjective social saturation was significantly positively correlated with perceived stress. However, counter to Study 1, subjective social saturation was not significantly correlated with the self-belief variables (belief in multiple selves, self-pluralism, and behavioral change at the bivariate level). By comparison, and consistent with Study 1, state perceived stress was significantly positively correlated with belief in multiple selves, self-pluralism, and behavioral change, and negatively associated with self-concept clarity. These analyses suggest that general stress is a more important predictor than social saturation of self-beliefs, a pattern that is consistent with the regression analyses from Study 1.

Study 2 found that participants' subjective feelings of saturation were not influenced by thinking about high or low saturated contexts. No differences were found between high and low saturation conditions in the manipulation check or in perceived stress, suggesting that thinking about hypothetical high saturation (vs. low saturation) environments was not stressful for our college student sample. It is possible that college students are generally more accustomed to saturated environments than the older adults in Study 1 and do not perceive this type of environment to be stressful. Consistent with this idea, any differences that did exist between conditions in self-beliefs were in the opposite direction as predicted. Finally, casting further doubt on the role of saturation in self-beliefs, the patterns in the bivariate correlations suggested that general stress was a better predictor of self-beliefs than subjective saturation.

One limitation of Study 2, however was the use of a hypothetical manipulation. Thus, Study 3 was conducted using a more direct manipulation of social saturation. Instead of participants simply imagining a high or low saturation context, they actually experienced one of these two contexts. It may be that the experience of real versus hypothetical saturation will more effectively increase or decrease the salience of the experience of saturation.

CHAPTER IV

STUDY 3

Study 3 attempted to manipulate people's perceived levels of saturation using a manipulation that actually immersed participants in either a more or less saturated environment. Participants walked through either a high socially saturated area or a low socially saturated area on campus and were told to either check their email, social networking sites, etc. during their walk (high social saturation) or to leave their belongings and cell phone behind before their walk (low social saturation). We again expected that by manipulating participants' objective experience of saturation, participants in the high social saturation condition (vs. low social saturation condition) would report higher subjective feelings of stress and less self-reflection, leading to greater belief in multiple selves.

Participants

One hundred and forty-four (101 female) students enrolled in an introductory psychology course at Texas A&M University participated for partial fulfillment of a course requirement. Ages ranged from 18-28 ($M = 18.73$, $SD = 1.56$). Reported racial/ethnic backgrounds included: 66.2% European American, 13.4% Hispanic/Latino, 9.2% more than one race, 5.6% Asian American, 4.2% African American/Black, and 1.4% Indian.

Materials and Procedure

Manipulation of social saturation. Participants were randomly assigned to one of two conditions: high or low social saturation. Participants in the high social saturation condition walked through the student center on campus (the Memorial Student Center) and were encouraged to check their email, social networking sites, etc. from their cell phone. It was expected that this task would increase the feeling of social saturation due to participants' immersion in the busy environment of the student center coupled with connection to technology via their cell phones. Participants in the low social saturation condition walked through an art gallery (the J. Wayne Stark Art Galleries, located in the Memorial Student Center) and were asked to leave their belongings and cell phones behind while they completed this task. It was expected that this task would decrease the feeling of saturation due to the quiet environment of the art gallery and the lack of connection to technology via cell phone. Both locations were centrally located on the main campus of Texas A&M University. Participants in the high social saturation condition were told:

> We all know that college students have busy and sometimes stressful lives. Studies have shown that doing a simple physical activity as a "mental break" before engaging in a task that requires mental effort reduces stress and aids in concentration and performance. In order to improve your concentration in this study, we will have you complete a "mental break" task. In this task, we would like you to walk through the Memorial Student Center (MSC) for eight minutes and then come back to this location, where you will fill out a questionnaire that assesses your personality and beliefs about the self. You will be given a timer to keep track of time. When the timer beeps after 8 minutes, please push the start/stop button on the front of the timer once to stop the timer and head back to the research assistant. Given that this is supposed to be a "mental break," we encourage you to talk to your friends if you see them, take out your cell phone and check your email, send text messages, or check your Facebook/Twitter/other social networking sites as you walk through the MSC, as these types of activities have been shown to be mentally refreshing.

Participants in the low social saturation condition were told:

> We all know that college students have busy and sometimes stressful lives. Studies have shown that doing a simple physical activity as a "mental break" before engaging in a task that requires mental effort reduces stress and aids in concentration and performance. In order to improve your concentration in this study, we will have you complete a "mental break" task. In this task, we would like you to walk through the art gallery for eight minutes and then come back to this location, where you will fill out a questionnaire that assesses your personality and beliefs about the self. You will be given a timer to keep track of time. When the timer beeps after 8 minutes, please push the start/stop button on the front of the timer once to stop the timer and head back to the research assistant. Given that this is supposed to be a "mental break," we would like you to leave your belongings, including your cell phone behind so that you cannot check your email, send text messages, or check your Facebook/Twitter/other social networking sites as you walk through the gallery, as "disconnecting" from these types of activities has been shown to be mentally refreshing.

Following the manipulation, participants in the high saturation condition completed several questionnaires in a hallway of the student center (which was typically a crowded, busy area); participants in the low saturation condition completed these questionnaires in a quiet room in the back of the art gallery. We used different manipulation check items from those in Study 2 in order to more closely get at participants' feelings of being connected and overloaded in their current context (vs. the items in Study 2, which emphasized their more general environments as well as feeling compelled to check their phones, update Facebook, etc.). Participants responded to the following manipulation check items: "Right now, how much do you feel like you are overloaded with things to do?", "Right now, how hassled do you feel with your environment?", and "Right now, how much do you feel like you are constantly dealing with demands on your time?" ($M = 2.92$, $SD = .87$, $\alpha = .68$).[5]

State stress and arousal. Since we did not find differences between saturation conditions in perceived stress in Study 2, we included a measure that might better capture participants' stress and arousal in the moment. State perceived stress and arousal were assessed using the 20-item Stress Arousal Adjective Checklist (SACL; King, Burrows, & Stanley, 1983; Mackay, Cox, Burrows, & Lazzerini; 1978). Participants indicated the extent to which they were experiencing emotions related to stress (e.g., "worried", "distressed) and arousal (e.g., "active", "alert") on a 5-point scale (1 = *not at all;* 5 = *very much*). Responses were averaged to create a composite stress score (*M* = 2.24, *SD* = .90, α = .75) and a composite arousal score (*M* = 2.83, *SD* = .58, α = .73).

Positive and negative affect. Given that Study 2 did not turn out as expected, we also added a measure of positive and negative affect to assess whether time spent in a high or low saturation environment influenced participants' mood more generally (i.e., independent of stress). Positive and negative affect were assessed using the 12-item Scale of Positive and Negative Experience (SPANE; Diener et al., 2010). Participants indicated the extent to which they were experiencing emotions related to positive affect (e.g., "good", "pleasant") and negative affect (e.g., "bad", "unpleasant") on a 5-point scale (1 = *not at all;* 5 = *very much*). Responses were averaged to create a composite positive affect score (*M* = 3.28, *SD* = .71, α = .88) and a negative affect score (*M* = 1.53, *SD* = .63, α = .87).

Self-alienation. Since Gergen claims that social saturation results in a "general loss of true and knowable selves" (p. 16), it is possible that people feel alienated from their self in highly saturated contexts. As such, I assessed self-alienation using the 4-item

subscale from the Authenticity Scale (Wood, Linley, Maltby, Baliousis, & Joseph, 2008). Participants indicated the extent to which they agreed with statements such as, "I don't know how I really feel inside," and "I feel as if I don't know myself very well" on a 5-point scale (1 = *strongly disagree; 5 = strongly agree*). Responses were averaged to create a composite self-alienation score (*M* = 1.99, *SD* = .86, α = .87).

Other measures. Participants completed the same measure of state self-reflection that was used in Study 2, which included time engaged in self-reflective activities (*M* = 3.27, *SD* = .46, α = .74) and interest in engaging in self-reflective activities (*M* = 3.35, *SD* = .46, α = .72). Participants additionally completed the same measures of self-concept clarity (*M* = 3.54, *SD* = .70, α = .83) that were used in Study 2 as well as the same measures assessing belief in multiple selves (belief in multiple selves (*M* = 2.95, *SD* = .97, α = .76), self-pluralism (*M* = 2.44, *SD* = .55, α = .87), and the behavioral change subscale of the DSS (*M* = 3.53, *SD* = .60, α = .69) that were used in Studies 1 and 2. The belief in multiple selves scale was significantly correlated with the Self-Pluralism Scale (*r* = .55, *p* < .001) and the behavioral change subscale of the DSS (*r* = .56, *p* < .001), and the Self-Pluralism scale was significantly correlated with the behavioral change subscale of the DSS (*r* = .72, *p* < .001), however, correlations were not as high as in Study 1, so a composite variable was not used. Finally, participants in both high and low saturation conditions responded to the following compliance check items: "Please write briefly about what you did in the walking task that you completed at the beginning of the study. Where did you go? What did you see? How did you feel?" and "Do you own a smartphone?" Participants in the high saturation condition only

responded to the following compliance check item: "During your walk at the beginning of the study, did you check your smartphone?" (participants in the low saturation condition left their cell phones and belongings with the research assistant).[6]

Results and Brief Discussion

Descriptive statistics and t-tests for all study variables are reported in Table 3. Bivariate correlations between all study variables are presented in Table 4.

As can be seen in the table, the results for the manipulation check revealed that, again, contrary to expectations, the manipulation check did not result in significant differences in participants' subjective experience of social saturation ($p = .41$). Further, there were no significant differences in stress between conditions ($p = .94$), supporting the notion that there is a disconnect between the objective and subjective experience of social saturation (consistent with Study 2).

Also consistent with Study 2, but contrary to hypotheses, differences between conditions were non-significant for most of the dependent variables. However, there were some trends that were in the opposite direction of hypotheses (also consistent with Study 2). Specifically, trends revealed that participants in the high social saturation condition reported less self-alienation ($p = .12$) and greater self-concept clarity ($p = .05$) than participants in the low social saturation condition.

An examination of the correlations (collapsed across conditions) allows for a comparison of these results with Studies 1 and 2 (see Table 3). Results revealed that subjective social saturation and state stress were significantly positively correlated, a

pattern that is consistent with Studies 1 and 2 (showing a positive relationship between social saturation and perceived stress). However, social saturation was not significantly correlated with belief in multiple selves or self-knowledge. Also consistent with Studies 1 and 2, state stress was significantly positively related to self-pluralism (but not belief in multiple selves or behavioral change) and self-alienation, but negatively related to self-concept clarity, suggesting that stress is more important for predicting self-beliefs than social saturation.

Taken together, these results are consistent with findings from both Studies 1 and 2 providing additional supporting evidence for objective social saturation's lack of influence on subjective feelings of saturation/overload. Further, these results support the notion that perceived stress is more important than social saturation for belief in multiple selves, since perceived stress was related to the dependent variables and social saturation was not.

Table 4 Correlations among variables in Study 3.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Manipulation Check (Social Saturation)	-	.04	-.05	.59*	-17*	-.36*	.46*	-.11	.03	.00	.11	.009
2. Time Engaged in Self-Reflection		-	.66*	-.03	.01	.05	-.04	.07	-.10	-.05	-.07	-.11
3. Interest in Self-Reflection			-	-.11	.03	.16	-.03	-.02	-.07	-.11	.03	-.01
4. State Stress				-	-.17*	-.64*	.71*	-.14	.21*	.04	.17*	.15
5. State Arousal					-	.45*	-.15	.16	-.12	-.06	-.13	-.08
6. Positive Affect						-	-.55*	-.23*	-.30*	-.12	-.30*	-.22*
7. Negative Affect							-	-.06	.25*	-.02	.15	.04
8. Self-Concept Clarity								-	-.61*	-.46*	-.71*	-.57*
9. Self-Alienation									-	.24*	.43*	.34*
10. Belief in Multiple Selves										-	.55*	.56*
11. Self-Pluralism											-	.72*
12. Behavioral Change												-

Note. $^*p < .05.$

CHAPTER V

GENERAL DISCUSSION AND CONCLUSIONS

Recent empirical research has begun to examine the variety of ways that technology influences the self-concept (e.g., Bessière et al., 2007; Ducheneaut et al, 2009; Klimmt et al., 2009). However, research has only very limitedly examined Gergen's (1991) conception of social saturation and how this state influences beliefs about the self (e.g., Dunn & Castro, 2012). To my knowledge, the current studies are the first to attempt to experimentally manipulate the construct of social saturation and examine how this influences beliefs about the self.

Study 1 provided preliminary support to the prediction that subjective social saturation is positively associated with greater belief in multiple selves and that this relationship is mediated by decreased self-reflection and increased perceived stress. Dunn and Castro (2012) find the same relationship between social saturation and self-pluralism, although they operationalized social saturation as an objective experience (vs. a subjective experience, as in the current studies). Given that both operationalizations of the social saturation construct are related to self-beliefs, this suggests that social saturation has both an objective and subjective component (although results from Studies 2 and 3 do not support the notion that the objective experience of saturation influences all participants' subjective experience of saturation).

While Study 1 relied entirely on self-reported individual differences in subjective experiences, Studies 2 and 3 attempted to experimentally manipulate the objective context of social saturation. It was expected that a context filled with connection to

others and technology (i.e., objective saturation) would result in the stressful experience of overload (i.e., subjective saturation). However, Studies 2 and 3 revealed no differences between high and low saturation conditions in either subjective saturation (i.e., overload) or general stress, suggesting a disconnect between objective and subjective experiences of saturation.

Although the manipulation failed, there were some interesting trends found in the data. Specifically, participants in the high social saturation (vs. low social saturation) condition reported less belief in multiple selves, less self-pluralism, less behavioral change (Studies 2 and 3) and less self-alienation as well as greater self-concept clarity (Study 3). This pattern of results suggests that objective social saturation may indeed influence people's beliefs about their self-concept, but not in the way that was originally anticipated (i.e., high saturation may result in less belief in multiple selves). However, given that the saturation conditions (i.e., high and low saturation) did not differ in subjective saturation, results should be interpreted with caution, as it is not entirely clear what it was that was manipulated. Perhaps only technology use versus non-use was manipulated, since participants in the high saturation used their smartphones and participants in the low saturation condition did not have access to their smartphones. It is also possible that I simply manipulated contexts, and the differences were in crowded versus not crowded environments.

Explaining Self-Beliefs: Social Saturation

Given that results for Studies 2 and 3 were contrary to expectations, it is worth considering several explanations for the pattern of results. First, differing characteristics

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between the participant samples may have influenced our findings. Study 1 supported Gergen's (1991) social saturation hypothesis, such that greater subjective social saturation positively predicted perceived stress and belief in multiple selves. Studies 2 and 3 did not replicate this pattern of results and, if anything, found the opposite pattern. Age/generational factors could be an explanation for this inconsistency between studies. Specifically, the sample in Study 1 was, on average, much older (36.22) than the college samples used in Studies 2 and 3 (average age was 18.47 and 18.73, respectively). Participants in Dunn and Castro's (2012) study also used a sample of older adults ($M =$ 34.7). The participants in the older sample probably did not grow up immersed in technology to the same extent as the college samples. Thus, the college students may be less likely to experience the same feelings of "saturation" that older adults feel. That is, given that social saturation was defined as something that induces stress from feelings of being overwhelmed with possibilities, younger participants may not experience this state of being as overwhelming. This may be due to the fact that technology has likely always had a pervasive presence in their lives (vs. older adults who have experienced life without technology such as computers, social media, etc.), potentially making saturation a "default" state (vs. a state of overload), and therefore, less distressing. Future research is needed in order to examine potential generational distinctions and how they might influence people's objective and subjective experiences of social saturation.

College student's day-to-day immersion in technology may also lead to the ability to integrate multiple aspects of their self-concept (e.g., multiple selves) into a single coherent self-concept (which would be consistent with Kernis and Goldman's

(2006) conceptualization of a multifaceted self). Given that high saturation participants reported both knowing their self more clearly (Study 3) and believing less in multiple selves (Study 2), this may indicate that young people see their multiple self-aspects as part of a single self-concept, rather than as fractured elements, or differentiated selves. Perhaps college students feel like they know themselves best in an environment where they are immersed in technological connectedness and integrate aspects of their self associated with technology (e.g., their "online" selves) into a coherent self-concept. Future research should examine if and how college students integrate technological aspects of their life into their self-concept.

Alternatively, it is also possible that participants in the high saturation condition reported less belief in multiple selves (Study 2), less self-alienation, and greater self-concept clarity (Study 3) due to an inability to process self-related information at a deep level. Carr's (2010) "shallowing hypothesis" claims that people are experiencing cognitive shallowing due to their constant immersion/connection to the internet, social media, etc. Carr argues that this immersion results in a "re-wiring" of the brain in response to the internet's constant, rapid, and distracting stream of information from a multitude of sources. In turn, this re-wiring leads to information being processed at a more concrete, surface level (vs. a deeper abstract level) and a reduced ability to engage in reflective thought. Recent empirical evidence supports this shallowing hypothesis in a variety of domains (e.g., Immordino-Yang, McColl, Damasio, & Damasio, 2009; Immordino-Yang, Chistodoulou, & Singh; Trapnell and Sinclair, 2012). Of particular importance to the current studies, the shallowing hypothesis suggests that social

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saturation may deplete the attentional resources people devote to thinking about the self. This may explain why participants in Study 2 reported less belief in multiple selves and less interest in self-reflection when in a high saturation environment. Perhaps it was easier for participants to think about the self on a shallow, surface level as a single entity. Considering multiple self-aspects and ways of being may be a deeper and more difficult form of self-processing. Future research should explore the potential relationship between cognitive shallowing and social saturation and how this influences people's beliefs about their self-concept.

Although these findings reveal some interesting insights into social saturation's influence on the self, it is still unclear what the broader implications of social saturation are in terms of well-being. Prior research on technology/social media and well-being is mixed, with some studies suggesting that online social networking is associated positive well-being outcomes (e.g., Ellison, Steinfield, & Lampe, 2007; Grieve, Indian, Witteveen, Tolan, & Marrington, 2013; Steinfield, Ellison, & Lampe, 2008; Valenzuela, Park, & Kee, 2009), and other studies suggesting negative well-being outcomes (Brandtzaeg, 2012; Junco & Cotton, 2011; Kalpidou, Costin, & Morris, 2011; Karpinski, Kirschner, Mellott, & Ochwo, 2013; Kross et al., 2013; Wood, Zivcakaova, Gentile, Archer, De Pasquale, & Nosko, 2011). Still other research suggests that outcomes are influenced by multiple factors such as self-esteem (Forest & Wood, 2012), size of social networks (Campisi, Bynog, McGehee, Oakland, Quirk, Taga, & Taylor, 2012; Manago, Taylor, & Greenfield, 2012; Rosen, Whaling, Rab, Carrier, & Cheever, 2013), and loneliness (Kim, LaRose, & Peng, 2009), among many others (e.g., Becker, Alzahabi, &

Hopwood, 2013; Chou and Edge, 2012; Feinstein, Hershenberg, Bhatia, Latack, Meuwly, & Davila, 2013; Locatelli, Kluwe, & Bryant, 2012; Seder & Oishi, 2009). Other studies simply find no relationship between social networking and well-being (Jelenchick, Eickhoff, & Moreno, 2013; Lou, Yan, Nickerson, & McMorris, 2012).

Thus, it is clear that further research is needed in order to elucidate the effects that technological connection has on well-being outcomes. Relevant to the current studies, participants in an objectively high saturation environment did not experience subjective feelings of overload. This suggests that high social saturation may not have a detrimental effect on college students. Further, given that participants reported less self-alienation and greater self-concept clarity (which is typically associated with positive outcomes such as high self-esteem, less neuroticism, and less public self-consciousness; Campbell et al., 1996), it may be that highly saturated contexts are associated with positive well-being outcomes for this sample. Future research on more general well-being should consider age as a potentially important moderator.

Explaining Self-Beliefs: Stress

Study 1 showed that greater subjective social saturation was associated with greater belief in multiple selves. However, this relationship became nonsignificant after controlling for perceived stress, suggesting that perceived stress is more important for predicting self-beliefs than social saturation. This suggests that the relationship between objective social saturation and self-pluralism observed in Dunn and Castro's study may also become nonsignificant if perceived stress was controlled for. Studies 2 and 3 also show support for the idea that general stress predicts belief in multiple selves. Study 2

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revealed that state perceived stress was positively related to all three belief in multiple selves variables (belief in multiple selves, self-pluralism, and behavioral change) and negatively related to self-concept clarity, suggesting that general stress evidences the types of effects that were hypothesized to stem from social saturation. Study 3 revealed patterns consistent with these results, indicating that state stress was positively related to self-pluralism (and trending in the same direction for belief in multiple selves and behavioral change) and positively related to self-alienation. Taken together, these results suggest that social saturation itself may not result in the outcomes that Gergen (1991) predicted. However, it may contribute to an increase in people's overall levels of stress (e.g., Study 1). In this way, Gergen may be both right and wrong in his predictions about social saturation. That is, the current data cast doubt on the idea that saturation itself leads to greater belief in multiple selves in the way that Gergen suggests. However, social saturation may contribute to more general perceived stress, which in turn, may lead to greater belief in multiple selves. In this way, social saturation may be indirectly related to greater belief in multiple selves.

Implications of Believing in Multiple Selves

To the best of my knowledge, the results of the current studies are the first to show that stress predicts greater belief in multiple selves, however, it is unclear whether holding this belief has positive or negative consequences for well-being. The notion that multiple selves may be detrimental to well-being has received some support in the psychological literature. For example, Donahue and colleagues (1993) found that people who reported high self-concept differentiation (i.e., seeing oneself as having different

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aspects of personality for different roles) showed poor social adjustment (i.e., lower self-esteem, greater depression, greater neuroticism) and reported less satisfaction in their social roles. Further, a longitudinal analysis revealed that poor emotional adjustment and less norm acceptance predicted self-concept differentiation at age 21 and 30 years later. Other studies have found similar detrimental effects. For example, researchers have found that greater instability of the self-concept was related to maladjustment (Block, 1961; Smith, 1958) and greater self-pluralism was associated with greater dissociation (i.e., the inability to coherently integrate thoughts, emotions, and experiences into memory; Suszek, 2005).

Although several studies show the negative aspects of multiple selves, this literature is not comprehensive and future research should examine beneficial/adaptive aspects of multiple selves. For example, people who hold dialectical beliefs about their self (i.e., that their self-concept is constantly changing, can be composed of contradictory aspects, and that all self-aspects are interconnected; Peng & Nisbett, 1999; see also Spencer-Rodgers, Williams, & Peng, 2010) may not experience negative outcomes related to the need to maintain self-concept consistency (e.g., Boucher, 2011; Festinger, 1957; Peng & Nisbett, 1999; Tafarodi, Lo, Yamaguchi, Lee, & Katsura, 2004), suggesting that belief in multiple selves may have some benefits.

Limitations

Although these studies provide an initial investigation into the ways that social saturation influences people's conceptualizations of their self, the studies are limited in a number of ways.

One limitation is that there may be more effective ways of manipulating social saturation. For example, the saturation manipulations were likely confounded with participants' familiarity with the environments. Participants were likely to be most familiar with the contexts presented to them in the high social saturation conditions and less familiar with the contexts in the low social saturation conditions, a factor that could have resulted in participants feeling like they knew their self-concept better in these environments. Specifically, in Study 2, an average weekday is probably more familiar to participants (high saturation) than a vacation on an island (low saturation) and in Study 3, the student center (high saturation) is more likely to be familiar to participants than the art gallery (low saturation). Future research should manipulate social saturation using environments that are matched in familiarity (i.e., high and low saturation conditions that are either both familiar or both unfamiliar). This potential confound with familiarity may have led to contrast effects in the low social saturation conditions. That is, when participants thought about a vacation on an island (Study 2) or walked through the art gallery (Study 3), this experience may have highlighted just how unlike their daily lives these experiences are. Therefore, these tasks may have reminded participants just how saturated their lives are by contrast, resulting in participants actually thinking more about their day-to-day feelings of saturation. This would support Gergen's (1991) argument that social saturation is such an ingrained part of people's day-to-day experience that it is impossible to fully eliminate the saturation experience.

Another limitation may have been the manipulation check items used in Studies 2 and 3. These items assessed only subjective feelings of social saturation, a potential

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problem because the objective context of saturation was what we actually manipulated (vs. subjective feelings of saturation). Future research should use manipulation check items that also assess objective saturation in order to better assess whether manipulations of saturation are successful.

Another potential limitation is the participant sample used in Study 1. Specifically, in Study 1, participants were recruited from MTurk, an online study platform in which participants sign up for HITs (i.e., studies or tasks) in return for financial compensation. Given that every aspect of the study process, from finding the study to completing the study, is online, participants are assumed to be technology savvy, which also suggest that familiarity may be an issue.

Finally, the time that participants spent completing the walking task in Study 3 may have been a limitation. Specifically, participants in both conditions walked through either the student center (high saturation) or the art gallery (low saturation) for eight minutes. This may not have been long enough to be completely immersed in technology (for the high saturation participants) or long enough to completely disconnect from technology (for the low saturation participants). Perhaps it takes more time for participants to feel overwhelmed and saturated in their environment and more time to disengage from this environment. Future research should explore immersing participants in/disconnecting participants from their environments for a greater period of time to address this limitation.

Conclusions

  The current studies contribute to the psychological literature on technology's influence on the self-concept. Specifically, the current studies empirically investigated Gergen's (1991) social saturation theory—that the self becomes fractured into multiple versions due to technological immersion and constant connection to others. Results showed mixed support for this theory, suggesting that social saturation itself does not directly result in the outcomes predicted by Gergen, but may influence self-beliefs in a more indirect way. It may be that saturation contributes to more general stress, which in turn may lead to greater belief in multiple selves. Therefore Gergen's description of the postmodern self as a self that is fractured into multiple selves may be accurate, but this does not seem to result from technological immersion (as Gergen theorizes), but rather from increased stress.

[1] The social saturation scale was broken down into cyber-based saturation (M = 2.09, SD = .72, α = .92) and place-based saturation (M = 2.50, SD = .79, α = .88); following Misra & Stokol (2012). The two subscales were highly correlated (r = .71) and a dependent samples t-test revealed that cyber-based saturation and place-based saturation did not significantly differ from each other (t (67) = -5.91, p < .001). Further, each subscale revealed the same pattern of association with the dependent variables, so the two were combined into a single composite.

[2] A similar pattern of results was found for the three scales (multiple selves, self-pluralism, and behavioral change) that formed the composite belief in multiple selves variable. A bivariate correlational analysis revealed that greater social saturation was associated with greater belief in multiple selves (r = .40, p = .001), greater self-pluralism (r = .36, p = .003), and greater behavioral change (r = .39, p = .001). Further, bootstrapping analyses (Preacher & Hayes, 2008) were conducted in which the number of bootstrap samples was set to 20,000 and 95% confidence intervals for the bias corrected indirect effects were computed. For all three scales (multiple selves, self-pluralism, and behavioral change), when self-reflection and perceived stress were included in the model as mediators, the sized of the effect of social saturation on each scale (total effect$_{\text{multiple selves}}$ = .40, p < .001; total effect$_{\text{self-pluralism}}$ = .36, p < .01; total effect$_{\text{behavioral change}}$ = .39, p < .001) decreased (direct effect $_{\text{multiple selves}}$ = .16, p = .20; direct effect $_{\text{self-pluralism}}$ = -.002, p = .99; direct effect $_{\text{behavioral change}}$ = .15, p = .24),

consistent with a mediation pattern. The indirect effect of social saturation on each scale was significant, as a 95% confidence interval around the direct effect did not include zero (CI $_{\text{multiple selves}}$ = .08, .42; CI $_{\text{self-pluralism}}$ = .20, .57; CI $_{\text{behavioral change}}$ = .09, .43). For all three scales, the direct effect became non-significant with the mediators included, suggesting full mediation.

[3] In order to explore results using two facets of the manipulation check items, compulsion and hassle, the manipulation check items that assess compulsion ("Right now, how compelled do you feel to check your email?", "Right now, how compelled do you feel to update your Facebook, Twitter, message/chat application, etc.?") were combined into a compulsion subscale (M = 2.03, SD = 1.00, α = .80) and manipulation check items that assess hassle ("Right now, how hassled do you feel with all the demands in your school, home, or work environment?", "Right now, how much do you feel like you are constantly shuffling between activities or demands?") were combined into a hassle subscale (M = 3.78, SD = 1.00, α = .79). There were no differences between conditions for either the compulsion subscale (t (126) = -.04, p =.97) or the hassle subscale (t (126) = .52, p =.60). Given that these two subscales were significantly correlated (r = .34, p < .001), the combined reliability was high (α = .75) and there were correlations between each subscale and the dependent variables were relatively unchanged, the compulsion and hassle subscales were combined into an overall subjective social saturation scale.

[4] I counterbalanced the order in which participants completed the measures. Half the participants completed the self-reflection prior to the dependent variables (multiple

selves measure, self-pluralism, behavioral subscale of the DSS, and self-concept clarity), whereas half completed the dependent variables prior to self-reflection. Two independent samples t-tests were conducted in order to determine whether there were counterbalancing effects within each condition. Results indicated that there were no significant counterbalancing effects in either the high social saturation condition ($t_{\text{manipulation check compulsion}}(63) = .94$, $p = .35$; $t_{\text{manipulation check hassle}}(63) = .09$, $p = .93$; $t_{\text{multiple selves composite}}(63) = 1.26$, $p = .21$; $t_{\text{self-reflection composite}}(63) = -.13$, $p = .89$; $t_{\text{perceived stress}}(63) = -1.40$, $p = .18$; $t_{\text{self-concept clarity}}(63) = .25$, $p = .80$) or low social saturation condition ($t_{\text{manipulation check compulsion}}(63) = -.04$, $p = .97$; $t_{\text{manipulation check hassle}}(63) = 1.00$, $p = .32$; $t_{\text{multiple selves composite}}(62) = -1.14$, $p = .26$; $t_{\text{self-reflection composite}}(62) = -.54$, $p = .59$; $t_{\text{perceived stress}}(62) = .87$, $p = .39$; $t_{\text{self-concept clarity}}(62) = .17$, $p = .87$).

[5] Originally, the manipulation check included six items ("Right now, how much do you feel like you are overloaded with things to do?", "Right now, how much do you feel like you have a clear mind?", "Right now, how connected do you feel to others?", "Right now, how connected do you feel to information?", "Right now, how hassled do you feel with your environment?", and "Right now, how much do you feel like you are constantly dealing with demands on your time?"). However these 6 items were evidenced an unacceptably low alpha (.39). Thus, I factor analyzed the six items using principal components analysis with Varimax (orthogonal) rotation. The analysis yielded two factors, which explained a total of 91.01% of the variance for all the variables. Factor 1 explained 34.85% of the variance and was labeled overload due to the high loadings of three items: "Right now, how much do you feel like you are overloaded with

things to do?", "Right now, how hassled do you feel with your environment?", and "Right now, how much do you feel like you are constantly dealing with demands on your time?". Factor 2 explained 21.31% of the variance and was labeled information/connection due to the high loading of three items: "Right now, how much do you feel like you have a clear mind?", "Right now, how connected do you feel to others?", and "Right now, how connected do you feel to information?". Factor 1 (M = 2.92, SD = .87, α = .68) was used as the manipulation check and Factor 2 (M = 3.20, SD = .63, α = .36) was dropped due to unacceptably low reliability.

[6] Eight participants in the high social saturation condition were excluded from analyses. Specifically, seven participants were excluded because they reported not using their cell phones during the walking task and one participant was excluded because he or she walked through the art gallery instead of the student center during the walking task.

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ALL MEASURES INCLUDED IN STUDIES

Social Saturation Measure (Study 1)

In the following questionnaire, you will be presented with a series of statements about your thoughts and feelings during the last month. In each case, please indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that sounds like a reasonable estimate using the scale provided.

1--------------2--------------3--------------4--------------5

| **Never** | **Almost never** | **Sometimes** | **Fairly often** | **Very often** |

1. In the last month, how often have you felt overwhelmed with the email messages you received?
2. In the last month, how often have you forgotten to respond to important email messages?
3. In the last month, how often have you felt pressured to respond to email messages quickly?
4. In the last month, how often have you felt that you have received more cell phone calls than you can handle?
5. In the last month, how often have you felt that you have received more text/instant messages than you can handle?
6. In the last month, how often have you felt that you receive more email attachments than you can handle?
7. In the last month, how often have you felt that you have had to spend too much time maintaining various information (e.g., updating, downloading apps, organizing files, etc.) on the devices you own (e.g.., laptops, desktop computers, iPads, cell phones, etc.)?
8. In the last month, how often have you felt pressured to manage several information and communication devices at the same time (e.g., checking your email while on the phone, text messaging while checking email, etc.)?
9. In the last month, how often have you felt that you have too many messages (e.g., wall postings, event notifications, personal messages, status updates, and

applications) on your Facebook page (or other social networking site) to deal with?

10. In the last month, how often have you felt pressure to update your Facebook status, Twitter status, chat status, etc.?
11. In the last month, how often have you felt that you receive more instant messages (e.g., on Facebook, on gChat, etc.) than you can handle?
12. In the last month, how often have you felt distracted by the email/test/message alerts from your communication devices?
13. In the last month, how often have you failed or forgotten to complete more important tasks because you had to respond to emails?
14. In the last month, how often have you ignored emails, texts, or other types of messages because you could not handle so many forms of communication?
15. In the last month, how often have you opted out of another activity in order to check your email or to maintain your social networks?
16. In the last month, how often have you found yourself doing several activities while online (i.e., doing more than one thing simultaneously)?
17. In the last month, how often have you been so involved with checking your email or your social networks that you have forgotten what you had been doing before (even just momentarily)?
18. In the last month, how often have you been so involved with checking your email or social networks that you have forgotten where you were or who you were with (even just momentarily)?
19. In the last month, how often have you checked your email/messages/social networks while you were having a conversation with someone or out with friends?
20. In the last month, how often have you felt that your work activities left you too little time for recreational activities?
21. In the last month, how often have you felt the urge to "go off the grid" for a while?
22. In the last month, how often have you felt that your work demands made you less sensitive to the needs of others?
23. In the last month, how often have you felt hassled by your commute to work?
24. In the last month, how often have you felt that you had too many demands in your home (e.g., cooking, housework, caring for children) to be able to handle comfortably?
25. In the last month, how often have you felt the demands on you in your work place exceeded your capacity to deal with them?
26. In the last month, how often have you felt that your home environment is too noisy?
27. In the last month, how often have you felt that your work environment is too noisy?
28. In the last month, how often have you felt compelled to look at your phone, tablet, or computer while you were engaged in another activity?

29. In the last month, how often have you felt that you were constantly shuffling between activities or demands?
30. In the last month, how often did you feel that you had quiet time for reflection?
31. In the last month, how much did you feel like you were constantly doing something?
32. In the last month, how often did you feel like you had free time?

Social Saturation Manipulation (Study 2)

High social saturation condition:

Please take a moment to imagine your average weekday. What do you do? Where do you go? Using the calendar pages provided below, **please Indicate everything that you would do throughout the day during each time period**. Please do not forget to list things like "riding the bus to campus," "going on the computer," "talking on the phone," and "texting." We want you to really try to get at what your full experience would be throughout the day, so please try to be as specific/thorough as you possibly can! Also, **if you would be engaged in multiple activities at once (e.g., watching TV and texting), please list all of those in the box**, even if you would not be texting the entire time. For hours that you would spend sleeping, please indicate this with an "X".

12:00 AM - 12:30 AM		3:00 AM - 3:30 AM		6:00 AM - 6:30 AM		9:00 AM - 9:30 AM	
12:30 AM - 1:00 AM		3:30 AM - 4:00 AM		6:30 AM - 7:00 AM		9:30 AM - 10:00 AM	
1:00 AM - 1:30 AM		4:00 AM - 4:30 AM		7:00 AM - 7:30 AM		10:00 AM - 10:30 AM	
1:30 AM - 2:00 AM		4:30 AM - 5:00 AM		7:30 AM - 8:00 AM		10:30 AM - 11:00 AM	
2:00 AM - 2:30 AM		5:00 AM - 5:30 AM		8:00 AM - 8:30 AM		11:00 AM - 11:30 AM	
2:30 AM - 3:00 AM		5:30 AM - 6:00 AM		8:30 AM - 9:00 AM		11:30 AM - 12:00 PM	

Please take a moment to imagine your average weekday. What do you do? Where do you go? Using the calendar pages provided below, **please Indicate everything that you would do throughout the day during each time period**. Please do not forget to list things like "riding the bus to campus," "going on the computer," "talking on the phone," and "texting." We want you to really try to get at what your full experience would be throughout the day, so please try to be as specific/thorough as you possibly can! Also, **if you would be engaged in multiple activities at once (e.g., watching TV and texting), please list all of those in the box**, even if you would not be texting the entire time. For hours that you would spend sleeping, please indicate this with an "X".

12:00 PM – 12:30 PM		3:00 PM – 3:30 PM		6:00 PM – 6:30 PM		9:00 PM – 9:30 PM	
12:30 PM – 1:00 PM		3:30 PM – 4:00 PM		6:30 PM – 7:00 PM		9:30 PM– 10:00 PM	
1:00 PM – 1:30 PM		4:00 PM – 4:30 PM		7:00 PM – 7:30 PM		10:00 PM – 10:30 PM	
1:30 PM – 2:00 PM		4:30 PM – 5:00 PM		7:30 PM – 8:00 PM		10:30 PM – 11:00 PM	
2:00 PM – 2:30 PM		5:00 PM – 5:30 PM		8:00 PM – 8:30 PM		11:00 PM – 11:30 PM	
2:30 PM – 3:00 PM		5:30 PM – 6:00 PM		8:30 PM – 9:00 PM		11:30 PM – 12:00 AM	

Low social saturation condition:

Please take a moment to imagine that you are on vacation on a beautiful tropical island. You are "going off the grid" to get away from it all, which means that you have no cell phone signal and no internet connection. Think about what you would like to do while you are on this vacation. where on the island would you go? What kinds of things would you do? Using the calendar pages provided below, **please indicate everything that you would do during your vacation on this island**. We want you to really try to get at what your full experience would be throughout a day spent on this vacation, so please try to be as specific/thorough as you possibly can! Also, **if you plan to be engaged in multiple activities at once (e.g., reading a book and watching the ocean), please list all of those in the box**, even if you wouldn't be looking at the ocean the entire time. For The hours you plan to spend sleeping, please indicate this with an "X".

12:00 AM - 12:30 AM		3:00 AM - 3:30 AM		6:00 AM - 6:30 AM		9:00 AM - 9:30 AM	
12:30 AM - 1:00 AM		3:30 AM - 4:00 AM		6:30 AM - 7:00 AM		9:30 AM - 10:00 AM	
1:00 AM - 1:30 AM		4:00 AM - 4:30 AM		7:00 AM - 7:30 AM		10:00 AM - 10:30 AM	
1:30 AM - 2:00 AM		4:30 AM - 5:00 AM		7:30 AM - 8:00 AM		10:30 AM - 11:00 AM	
2:00 AM - 2:30 AM		5:00 AM - 5:30 AM		8:00 AM - 8:30 AM		11:00 AM - 11:30 AM	
2:30 AM - 3:00 AM		5:30 AM - 6:00 AM		8:30 AM - 9:00 AM		11:30 AM - 12:00 PM	

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Please take a moment to imagine that you are on vacation on a beautiful tropical island. You are "going off the grid" to get away from it all, which means that you have no cell phone signal and no internet connection. Think about what you would like to do while you are on this vacation. where on the island would you go? What kinds of things would you do? Using the calendar pages provided below, **please indicate everything that you would do during your vacation on this island**. We want you to really try to get at what your full experience would be throughout a day spent on this vacation, so please try to be as specific/thorough as you possibly can! Also, **if you plan to be engaged in multiple activities at once (e.g., reading a book and watching the ocean), please list all of those in the box**, even if you wouldn't be looking at the ocean the entire time. For The hours you plan to spend sleeping, please indicate this with an "X".

12:00 PM – 12:30 PM		3:00 PM – 3:30 PM		6:00 PM – 6:30 PM		9:00 PM – 9:30 PM	
12:30 PM – 1:00 PM		3:30 PM – 4:00 PM		6:30 PM – 7:00 PM		9:30 PM– 10:00 PM	
1:00 PM – 1:30 PM		4:00 PM – 4:30 PM		7:00 PM – 7:30 PM		10:00 PM – 10:30 PM	
1:30 PM – 2:00 PM		4:30 PM – 5:00 PM		7:30 PM – 8:00 PM		10:30 PM – 11:00 PM	
2:00 PM – 2:30 PM		5:00 PM – 5:30 PM		8:00 PM – 8:30 PM		11:00 PM – 11:30 PM	
2:30 PM – 3:00 PM		5:30 PM – 6:00 PM		8:30 PM – 9:00 PM		11:30 PM – 12:00 AM	

Manipulation Check (Study 2)

For each of the following statements, please indicate whether you felt a certain way during the previous task using the scale provided.

1---------------2---------------3---------------4---------------5
Not at all   Somewhat   Very much

1. Right now, how compelled do you feel to look at your phone?
2. Right now, how compelled do you feel to check your email?
3. Right now, how compelled do you feel to check your Facebook status, Twitter status, chat status, etc.?
4. Right now, how hassled do you feel with all the demands in your school, home, or work environment?
5. Right now, how much do you feel like you are constantly shuffling between activities or demands?

Social Saturation Manipulation (Study 3)

High social saturation condition:

> We all know that college students have busy and sometimes stressful lives. Studies have shown that doing a simple physical activity as a "mental break" before engaging in a task that requires mental effort reduces stress and aids in concentration and performance. In order to improve your concentration in this study, we will have you complete a "mental break" task. In this task, we would like you to walk through the Memorial Student Center (MSC) for eight minutes and then come back to this location, where you will fill out a questionnaire that assesses your personality and beliefs about the self. You will be given a timer to keep track of time. When the timer beeps after 8 minutes, please push the start/stop button on the front of the timer once to stop the timer and head back to the research assistant. Given that this is supposed to be a "mental break," we encourage you to talk to your friends if you see them, take out your cell phone and check your email, send text messages, or check your Facebook/Twitter/other social networking sites as you walk through the MSC, as these types of activities have been shown to be mentally refreshing.

Low social saturation condition:

> We all know that college students have busy and sometimes stressful lives. Studies have shown that doing a simple physical activity as a "mental break" before engaging in a task that requires mental effort reduces stress and aids in concentration and performance. In order to improve your concentration in this study, we will have you complete a "mental break" task. In this task, we would like you to walk through the art gallery for eight minutes and then come back to this location, where you will fill out a questionnaire that assesses your personality and beliefs about the self. You will be given a timer to keep track of time. When the timer beeps after 8 minutes, please push the start/stop button on the front of the timer once to stop the timer and head back to the research assistant. Given that this is supposed to be a "mental break," we would like you to leave your belongings, including your cell phone behind so that you cannot check your email, send text messages, or check your Facebook/Twitter/other social networking sites as you walk through the gallery, as "disconnecting" from these types of activities has been shown to be mentally refreshing.

Manipulation Check (Study 3)

For each of the following statements, please indicate whether you felt a certain way during the previous task using the scale provided.

1--------------2--------------3--------------4--------------5
Not at all   Somewhat   Very much

1. Right now, how much do you feel like you are overloaded with things to do?
2. Right now, how much do you feel like you have a clear mind?
3. Right now, how connected do you feel to others?
4. Right now, how connected do you feel to information?
5. Right now, how hassled do you feel with your environment?
6. Right now, how much do you feel like you are constantly dealing with demands on your time?

Compliance Check Items (Study 3)

1. Do you own a smart phone?
2. During your walk at the beginning of the study, did you check your smartphone? (high saturation condition only)
3. Please briefly write about what you did in the walking task that you completed at the beginning of the study. Where did you go? What did you see? How did you feel?

Mediators

Self-Reflection (Study 1)

For each of the following statements, please indicate your level of agreement or disagreement using the scale provided.

1--------------2--------------3--------------4--------------5
Strongly   Neither agree   Strongly
disagree   nor disagree   agree

1. I don't often think about my thoughts.
2. I rarely spend time in self-reflection.
3. I frequently examine my feelings.

4. I don't really think about why I behave the way I do.
5. I frequently take time to reflect on my thoughts.
6. I often think about the way I feel about things.
7. I am not really interested in analyzing my behavior.
8. It is important for me to evaluate the things that I do.
9. I am very interested in examining what I think about.
10. It is very important to me to try to understand what my feelings mean.
11. Right now, I have a definite need to understand the way that my mind works.
12. It is important for me to be able to understand how my thoughts arise.
13. I am usually aware of my thoughts.
14. I'm often confused about the way that I really feel about things.
15. I usually have a very clear idea about why I've behaved in a certain way.
16. I'm often aware that I'm having a feeling, but I often don't quite know what it is.
17. My behavior often puzzles me.
18. Thinking about my thoughts makes me more confused.
19. Often I find it difficult to make sense of the way I feel about things.
20. I usually know why I feel the way I do.

Perceived Stress (Study 1)

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate. Please use the scale provided.

1---------------2---------------3---------------4---------------5
Never   **Almost**   **Sometimes**   **Fairly**   **Very**
               never   **often**   **often**

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and "stressed"?
4. In the last month, how often have you dealt successfully with irritating life hassles?
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?

6. In the last month, how often have you felt confident about your ability to handle your personal problems?
7. In the last month, how often have you felt that things were going your way?
8. In the last month, how often have you found that you could not cope with all the things you had to do?
9. In the last month, how often have you been able to control irritations in your life?
10. In the last month, how often have you felt that you were on top of things?
11. In the last month, how often have you been angered because of the things that happened that were outside of your control?
12. In the last month, how often have you found yourself thinking about the things that you had to accomplish?
13. In the last month, how often have you been able to control the way you spend your time?
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

State Perceived Stress (Study 2)

The questions in this scale ask you about your feelings and thoughts right now. In each case, you will be asked to indicate how you are feeling or thinking a certain way. Please use the scale provided.

1---------------2---------------3---------------4---------------5
Strongly   **Neither agree**   **Strongly**
disagree   **nor disagree**   **agree**

_____ 1. I feel upset because of something that happened unexpectedly.
_____ 2. I feel like I am unable to control the important things in my life.
_____ 3. I feel nervous or "stressed."
_____ 4. I feel like I am successfully dealing with irritating life hassles.
_____ 5. I feel like I am effectively coping with important changes that are occurring in my
       life.
_____ 6. I feel confident about my ability to handle my personal problems.
_____ 7. I feel like things are going my way.
_____ 8. I feel like I cannot cope with all the things I have to do.
_____ 9. I feel like I am able to control irritations in my life.
_____ 10. I feel like I am on top of things.
_____ 11. I feel angry because of things happening that are outside of my control.
_____ 12. I find myself thinking about everything that I have to accomplish.

_____ 13. I feel like I am able to control the way I spend my time.
_____ 14. I feel like my difficulties are piling up so high that I cannot overcome them.

Self-Reflection (Studies 2 and 3)

For each of the following statements, please consider each activity and respond to each question about this behavior by CIRCLING your response on the scale below each question.

1. **Activity: thinking about my thoughts.**

    a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time at all		**Some time**		**Very much time**

    b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all interested		**Somewhat interested**		**Very interested**

2. **Activity: spending time in self-reflection.**

    a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time at all		**Some time**		**Very much time**

    b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all interested		**Somewhat interested**		**Very interested**

3. **Activity: examining my feelings.**

    a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time at all		Some time		Very much time

    b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all interested		Somewhat interested		Very interested

4. **Activity: thinking about why I behave the way I do.**

    a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time at all		Some time		Very much time

    b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all interested		Somewhat interested		Very interested

5. **Activity: taking time to reflect on my thoughts.**

    a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time at all		Some time		Very much time

    b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all		**Somewhat**		**Very**
interested		**interested**		**interested**

6. <u>**Activity: thinking about the way I feel about things.**</u>

    a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time		**Some**		**Very much**
at all		**time**		**time**

    b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all		**Somewhat**		**Very**
interested		**interested**		**interested**

7. <u>**Activity: analyzing my behavior.**</u>

    a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time		**Some**		**Very much**
at all		**time**		**time**

    b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all		**Somewhat**		**Very**
interested		**interested**		**interested**

8. <u>**Activity: evaluating the things that I do.**</u>

    a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time at all		**Some time**		**Very much time**

b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all interested		**Somewhat interested**		**Very interested**

9. <u>Activity: examining what I think about.</u>

a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time at all		**Some time**		**Very much time**

b. How interested are you in engaging in this activity?

1	2	3	4	5
Not at all interested		**Somewhat interested**		**Very interested**

10. <u>Activity: trying to understand what my feelings mean.</u>

a. How much time do you spend engaged in this activity?

1	2	3	4	5
No time at all		**Some time**		**Very much time**

b. How interested are you in engaging in this activity?

1	2	3	4	5
1	**2**	**3**	**4**	**5**

11. <u>Activity: needing to understand the way that my mind works.</u>

a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time at all		**Some time**		**Very much time**

b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all interested		**Somewhat interested**		**Very interested**

12. <u>Activity: understanding how my thoughts arise.</u>

a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time at all		**Some time**		**Very much time**

b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all interested		**Somewhat interested**		**Very interested**

13. <u>Activity: being aware of my thoughts.</u>

a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**

No time at all		Some time		Very much time

b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all **interested**		**Somewhat** **interested**		**Very** **interested**

14. <u>Activity: being confused about the way that I really feel about things.</u>

a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time **at all**		**Some** **time**		**Very much** **time**

b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all **interested**		**Somewhat** **interested**		**Very** **interested**

15. <u>Activity: having a very clear idea about why I'm behaving in this way.</u>

a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time **at all**		**Some** **time**		**Very much** **time**

b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all **interested**		**Somewhat** **interested**		**Very** **interested**

16. <u>Activity: being aware that I have a feeling, but not knowing quite what it is.</u>

    a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time		**Some**		**Very much**
at all		**time**		**time**

    b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all		**Somewhat**		**Very**
interested		**interested**		**interested**

17. <u>Activity: being puzzled at my behavior.</u>

    a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time		**Some**		**Very much**
at all		**time**		**time**

    b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all		**Somewhat**		**Very**
interested		**interested**		**interested**

18. <u>Activity: thinking about my thoughts and being more confused.</u>

    a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time		**Some**		**Very much**
at all		**time**		**time**

b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all		**Somewhat**		**Very**
interested		**interested**		**interested**

19. <u>Activity: finding it difficult to make sense of the way I feel about things.</u>

a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time		**Some**		**Very much**
at all		**time**		**time**

b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all		**Somewhat**		**Very**
interested		**interested**		**interested**

20. <u>Activity: knowing why I feel the way I do.</u>

a. How much time do you spend engaged in this activity?

1	**2**	**3**	**4**	**5**
No time		**Some**		**Very much**
at all		**time**		**time**

b. How interested are you in engaging in this activity?

1	**2**	**3**	**4**	**5**
Not at all		**Somewhat**		**Very**
interested		**interested**		**interested**

Affective Stress and Arousal (Study 3)

Please indicate the extent to which you are experiencing each of the following emotions, right now, at this moment.

1--------------2--------------3--------------4--------------5
Not at all   **Somewhat**   **Very much**

_____ 1. Calm
_____ 2. Contented
_____ 3. Active
_____ 4. Vigorous
_____ 5. Comfortable
_____ 6. Lively
_____ 7. Uneasy
_____ 8. Tired
_____ 9. Sleepy
_____ 10. Worried
_____ 11. Distressed
_____ 12. Uptight
_____ 13. Drowsy
_____ 14. Tense
_____ 15. Relaxed
_____ 16. Passive
_____ 17. Energetic
_____ 18. Alert
_____ 19. Bothered
_____ 20. Aroused

Positive and Negative Affect (Study 3)

Please indicate the extent to which you are experiencing each of the following emotions, right now, at this moment.

1--------------2--------------3--------------4--------------5
Not at all   **Somewhat**   **Very much**

_____ 1. Positive

_____	2. Negative
_____	3. Good
_____	4. Bad
_____	5. Pleasant
_____	6. Unpleasant
_____	7. Happy
_____	8. Sad
_____	9. Afraid
_____	10. Joyful
_____	11. Angry
_____	12. Contented

Dependent variables:

Belief in Multiple Selves (Studies 1, 2, and 3)

The following questions assess your opinions about the self. Please indicate your agreement or disagreement with each statement using the scale provided.

1---------------2---------------3---------------4---------------5
Strongly   **Neither agree**   **Strongly**
disagree   **nor disagree**   **agree**

1. People have multiple "true" selves, each representing a different role.
2. I have multiple selves I can draw qualities from depending on the situation.
3. I feel like I have an "online self" and an "offline self."
4. Who I am depends on the environment.

Self-pluralism (Studies 1, 2, and 3)

The following questions assess your opinions about the self. Please indicate your agreement or disagreement with each statement using the scale provided.
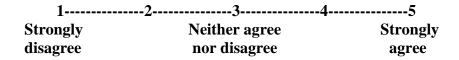
1---------------2---------------3---------------4---------------5
Strongly   **Neither agree**   **Strongly**
disagree   **nor disagree**   **agree**

1. People who know me well would say I'm pretty predictable.
2. I have fairly big mood swings.
3. Sometimes, I'm surprised at myself for the ways I feel or the things I do.

4. I act and feel essentially the same way whether at home, at work, or with friends.
5. Sometimes I behave so differently in different situations that people would have difficulty recognizing me as the same person.
6. I occasionally behave in a way unlike my normal self.
7. I'm the same sort of person regardless of who I'm with.
8. There have been times when I did not remember a series of things I had done, or the way that I had behaved.
9. Sometimes I feel like two (or more) persons under the same skin.
10. Though I behave differently in different situations (for example, at a party, at work, at home), I always feel the same inside.
11. I get along best when I act and feel like a totally different person at different times.
12. If each of the different people who know me well were asked to describe me, the descriptions would be much the same.
13. I only have minor changes in mood.
14. One side of my personality is quite different from the other side.
15. I am the same kind of person in every way, day in and day out.
16. There are parts of me that are so different that I have given them different names.
17. I am almost never surprised at the way I behave or feel.
18. I sometimes feel inside like a different person than at other times, but this never seems apparent to other people.
19. People who know me would say that my behavior changes from situation to situation.
20. My personality is always the same, regardless of whom I'm with or the situation I'm in.
21. If I were to describe myself in detail I'd have to use two (or more) different descriptions.
22. People who know me well would say I act quite differently at different times.
23. Though I vary somewhat from time to time, in general I always feel much the same.
24. I have tow (or more) distinct personalities and at any given time I'm either one or the other.
25. I change very little from time to time or from one situation to another.
26. Sometimes I feel pretty different from the way I feel at other times, but generally I feel the same way.
27. There have been times when I felt like a completely different person from what I was from the day before.
28. People who know me well would say I behave basically the same in all circumstances.
29. I sometimes have conflicts over whether to be one kind of person or a different kind.
30. I go along on a pretty even keel from day to day.

Behavioral change subscale of the Dialectical Self Scale (Studies 1, 2, and 3)

Listed below are a number of statements about your thoughts, feelings, and behaviors. Please indicate your level of agreement or disagreement with each statement using the scale provided.

1---------------2---------------3---------------4---------------5
Strongly   **Neither agree**   **Strongly**
disagree   **nor disagree**   **agree**

1. I am the same around my family as I am around my friends.
2. I believe my habits are hard to change.
3. I often change the way I am, depending on who I am with.
4. The way I behave usually has more to do with immediate circumstances than with my personal preferences.
5. My outward behaviors reflect my true thoughts and feelings.
6. I am constantly changing and am different from one time to the next.
7. I usually behave according to my principles.
8. I sometimes find that I am a different person by the evening than I was in the morning.

Self-Concept Clarity (Studies 2 and 3)

The following questions assess your opinions about the self. Please indicate your agreement or disagreement with each statement using the scale provided.
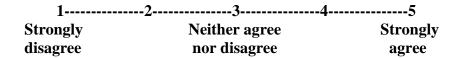
1---------------2---------------3---------------4---------------5
Strongly   **Neither agree**   **Strongly**
disagree   **nor disagree**   **agree**

1. My beliefs about myself often conflict with one another.
2. On one day I might have one opinion of myself and on another day I might have a different opinion.
3. I spend a lot of time wondering about what kind of person I really am.
4. Sometimes I feel that I am not really the person that I appear to be.
5. When I think about the kind of person I have been in the past, I'm not sure what I was really like.
6. I seldom experience conflict between the different aspects of my personality.
7. Sometimes I think I know other people better than I know myself.
8. My beliefs about myself seem to change very frequently.

9. If I were asked to describe my personality, my description might end up being different from one day to another day.
10. Even if I wanted to, I don't think I could tell someone what I'm really like.
11. In general, I have a clear sense of who I am and what I am.
12. It is often hard for me to make up my mind about things because I don't really know what I want.

Self-Alienation (Study 3)

The following questions assess your opinions about the self. Please indicate your agreement or disagreement with each statement using the scale provided.

<pre>
1---------------2----------------3---------------4---------------5
Strongly   Neither agree   Strongly
disagree   nor disagree   agree
</pre>

1. I don't know how I really feel inside.
2. I feel as if I don't know myself very well.
3. I feel out of touch with the "real me."
4. I feel alienated from myself.