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UNIVERSITY OF CALIFORNIA  
RIVERSIDE

Assessing Persons, Situations and Behavior:  
Implications for Consistency, Congruence and Construal

A Dissertation submitted in partial satisfaction  
of the requirements for the degree of

Doctor of Philosophy

in

Psychology

by

Ryne Anthony Sherman

June 2011

Dissertation Committee:

Dr. David C. Funder, Chairperson

Dr. Daniel J. Ozer

Dr. Robert Rosenthal

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2011

The Dissertation of Ryne Anthony Sherman is approved:

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Committee Chairperson

University of California, Riverside

## Acknowledgment of Contributions

The work contained in this dissertation represents the culmination of more than five years of work by multiple members of the Riverside Accuracy Lab. Thus, much of the theoretical content discussed here overlaps with a number of published and unpublished works from the Riverside Accuracy Lab. This includes a published book chapter (Wagerman & Funder, 2009), a symposium talk (Wagerman & Funder, 1/2008), an invited talk (Funder & Wagerman, 7/2008), one dissertation (Wagerman, 2008), several poster presentations (Nave, Sherman, & Funder, 2/2009; Sherman, Nave & Funder, 2/2009; 6/2009; 1/2010; 1/2011; Wagerman & Funder, 1/2006; 1/2008; Wagerman, Greve, & Funder, 4/2006), two funded NSF grant proposals (to David C. Funder, 2007; 2011), and numerous lab meetings which, beside myself, frequently included the following individuals (alphabetically listed): Lisa Fast, David Funder, Esther Guillaume, Tera Letzring, Christopher Nave, Elysia Todd, Seth Wagerman, and Lawrence Wright. In addition, major portions of the empirical work presented in this dissertation (Chapters 2-4) come from published papers and manuscripts currently in preparation. Specifically, Chapter 2 is a verbatim copy of Sherman, Nave, and Funder (2010a). Chapter 3 comes largely from a manuscript currently under revision (Sherman, Nave, & Funder, *under revision*). And the introduction to Chapter 4 borrows language and ideas from an NSF grant to David Funder (2011). First drafts of all manuscripts were written by me, however over the course of many years of work together the source of any particular idea or piece of information is sometimes lost. I have tried to ensure that, where identifiable, ideas and paraphrased sentences appearing in published and

unpublished works (including those mentioned above) are cited. Where not identifiable, let this acknowledgment serve notice to the reader that the aforementioned people have provided both indirect and direct contributions to the work presented throughout this dissertation. Lastly I must thank my committee members David Funder, Dan Ozer, and Robert Rosenthal for their thoughtful feedback and meticulous edits of previous drafts of this dissertation.

## Acknowledgements

In general, when one completes something that takes many years to complete it is unlikely that one could have done so alone. This dissertation, which represents the completion of my Ph. D., is no exception to this rule. I have had the great fortune to have had many people who have helped me in a wide variety of ways along the way. In this section, I will attempt (and almost surely fail) to acknowledge the people who have helped me along the way.

Like most everyone, the most influential people on me and my life so far has been my family. Since as far back as I can remember, my parents—Mark and Sarah—have always provided me with the opportunities to do the things I wanted to do in life. Ironically, it was their sacrifices of their own opportunities that led to so many opportunities for me. For example, when I was a teenager and my schoolmates were working summer jobs, my dad told me I didn't have to work a job over the summer as long as I played baseball and did work around the house (which largely included cleaning and swimming in the pool). What a great opportunity that was. In addition, my parents have always encouraged me to do my best no matter what I strive to do. I recall Mom encouraging me to work hard in school as a youngster and I remember Dad pushing me to work hard at baseball, basketball, and golf. I even remember arguing with my parents during my teenage years about whether or not I was working hard enough at X, where X was just about anything. I would have never believed it at the time, but in retrospect, they were right. But beyond opportunities and work ethic, I have to thank my parents for providing me with the motivation to work this hard at school. Both of my parents started

working right out of high school. My mom has worked in an office job for her entire life and my dad in construction with a specialty in concrete work. While I believe these are outstanding jobs that anyone should be proud of, by watching them (and sometimes working with them; ex: building a deck in the middle of winter; pouring concrete) I learned they weren't for me. Seeing how hard they worked at their jobs and how little fun I personally would have at them, made me want to pursue even more something that I seemed to have a knack for...learning.

In addition to my parents, I must also thank my brother Brent who taught me perhaps one of the most important lessons a researcher can learn: proving anything is hard to do.<sup>1</sup> And I must thank my sister Chelsea who showed me that I had it in me to be warm and friendly to people I care about. Finally, I must give special thanks to my grandfather, Harry Sherman, who has been both a great inspiration and provider to me. I will always treasure my many visits with him where he would tell me tales of the Second World War, complete with photographs.

Beyond my family, I have also had the great fortune of having been influenced by many outstanding teachers. The names that come to mind as important influences on me prior to college are my 7<sup>th</sup> grade math teacher Bill Gaddis, my 7<sup>th</sup> grade social studies teacher Mark Franks, and my high school history teacher Bob Fitzgerald. At Monmouth College psychology professors Joan Wertz and Kristin Larson along with history professors Simon and Stacy Cordery as well as economics professor Richard "Dick" Johnston have been influential on my career path. And in graduate school I have picked

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<sup>1</sup> His preferred method was the use of the phrase, "You can't prove that."



up invaluable nuggets of information from such brilliant psychologists as Veronica Benet-Martinez, Steve Clark, Robin DiMatteo, Michael Erickson, Howard Friedman, Sonja Lyubomirsky, Chandra Reynolds, Kate Sweeny, and Tom Sy. While all of these individuals have impacted me and the way I think about psychological issues, the following individuals have had the greatest impact on my dissertation and I wish to especially acknowledge them.

When I enrolled as an undergraduate student at Monmouth College I began as a double major in computer science and history. After just one computer science class though, I dropped that major in hopes of finishing a history degree and continuing on to law school. But before I could do that I had to complete a course in the “life sciences.” The course I wanted to take—biology—did not fit into my schedule. So in an effort to get this life science roadblock out of my way, I enrolled in the only course that did fit in my schedule: PSYC101. The professor was Jon Grahe. After receiving what I believed to be an unacceptably low grade on the first midterm (around an 86% as I recall) I met with Jon to talk about what could be done. Much to my surprise, Jon was thrilled with my grade calling it one of the best grades in the class and asked me what my major was. When I told him it was history, he asked “Are you sure?” Seeing as how I had just changed my major to only history, I gave him a perplexed look and said, “Yes. I am quite certain that is my major.” He said, “No, I mean, are you sure you want to be a history major? Why not major in psychology?” I cannot say what made Jon think I would want to be a psychology major at that point, but he was right. I continued on in his course (eventually receiving an A) and by the end of the class I had added psychology to my

history major. In the next semester I took statistics and social psychology with Jon and I was hooked. Soon after I was working as a TA for Jon in statistics and I was working with him on a research project. We eventually published that research in 2006 (my first publication) and despite moving across the country to a new college my senior year, Jon remained my advisor for my senior thesis.

I am indebted to Jon in many ways. First, he could see my interest in research (particularly in statistics) and he pushed me to be the best I could be. I recall one trip he and I made to give a research talk to some people at the University of Chicago. On that trip I told Jon that I wanted to be a psychology professor who does research and that I wanted to go to graduate school. He said, “Where do you want to go to graduate school?” I said I wasn’t sure yet, but I knew I wanted to do research. He said if I told him where I wanted to go he could get me in there. Skeptical, I asked “If I said I wanted to go to Harvard you think I could get in there?” He said, “If you want to go to Harvard we can get you in there.” So I started trying to figure out where I wanted to go when I came across David Funder’s research on personality judgment and I was hooked. I told Jon I wanted to go to UCR. Jon encouraged me to apply for an undergraduate Psi Chi research grant which would let me go to any research university in the country (that would have me) to do research over the summer. I applied and got accepted. Now I needed to find a place to go. Of course I wanted to go to UCR. So at SPSP in New Orleans Jon followed David Funder out of symposium got on an elevator with him. David and Jon both have different versions of the story from this point on, but suffice it to say that Jon convinced David to let me join his lab as a research assistant over the summer. It didn’t take long at

UCR for me to realize that I wanted to be there working in the Accuracy Lab. At the end of the summer, I asked David to write me a letter of recommendation and he agreed. At that point I sort of figured I was a lock to get into UCR and didn't bother applying anywhere else. So Jon was right again. He got me into the school I wanted to get into.

Beyond getting me excited about research, showing me I wanted to be psychology major, and getting me into the only graduate school I wanted to go to, Jon also prepared me for graduate school. When I arrived at UCR I felt like I already knew what research was about and what I was supposed to be doing there. Jon had taught me just about all he knew about SAS and that really helped me get research off the ground and running my first year. As I hope these past few paragraphs have made obvious, Jon has profoundly influenced me and my career. There is no doubt that without his guidance I would not be where I am today. I will be forever grateful for his mentorship.<sup>2</sup>

Another individual who has profoundly shaped the way I think about research and data analysis is Robert Rosenthal. I met Bob<sup>3</sup> briefly during my summer research experience at UCR and watched him compute an ANOVA by hand literally on the back of an envelope. I am one of the many students who have had the great fortune of learning the fundamentals of research design and statistics from Bob. I am also one of the few students who had the opportunity to effectively take his classes twice as I served as his TA for graduate statistics. While I thought I had learned it all the first time around, my knowledge became much more refined the second time and I am sure that if I sat through his courses for a third time I would learn even more. One of the most important lessons I

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<sup>2</sup> Unfortunately for my wallet, Jon is aware of this and manages to get together with me near bars.

<sup>3</sup> I was corrected on my first day of class with him after calling him "Dr. Rosenthal."

have learned from Bob though is that one can have a hugely successful and influential career in psychology without the slightest bit of arrogance or self-promotion. Despite all of his accomplishments and a long career at Harvard, Bob remains the most humble person I have met. When I started out on the job market a few months ago Bob said to me “In my experience it isn’t about where you are at, but what you do when you get there.” I will never forget this piece of advice.

Of all of the professors I have interacted with over the past 5 years at UCR, I am certain that I have spent more time in Dan Ozer’s office than any other. This is in part because Dan is in everyday of the week starting at 8am and because he always has his office door open. But I would like to think that it also is because we truly enjoy the conversations we have with each other. Our conversations have ranged widely from discussions of where personality comes from, the Q-sort method, complicated analytic techniques, and how to deal with reviewers to more casual discussions of baseball and gambling. In every one of our conversations I left feeling like I truly learned something new and important. I remember at a conference during my first year, former UCR student Mike Furr said that I should take advantage of my time in graduate school by spending as much time as I can with smart people. I know that with Dan I followed Mike’s advice. Although I will miss them dearly in the future, I will always treasure our conversations and take them with me.

In wrapping up my thanks to teachers who have impacted me, I must give my greatest thanks to David Funder. While he may have been intimidated into doing so, he graciously accepted me to work in his lab during the summer of 2005 where I got my first

real taste of graduate school. During my time as an actual graduate student at UCR David has been nothing short of an outstanding advisor. I feel that I have learned more from David than any other teacher in my life and I will forever take with me the countless knowledge he has bestowed upon me. David taught me how to become a professional psychologist, how to mentor students, and how to think like a psychological researcher. He has been incredibly gracious by providing me with opportunities to write first drafts of manuscripts and review papers. He has encouraged me to take ideas and to present them to the scientific community. But beyond these, David has acted at times like a parent as I lived far away from my own parents. He has provided his advice about situations that certainly do not fall under the jurisdiction of graduate student mentor. He has even gone so far as to provide me with a ride in to school on more than one occasion. I believe I can best sum up my gratitude for David in this way: My decision to come to UCR was based on the fact that I would get to work with David Funder and this is a decision I know I will never regret.

I must also extend my thanks to those people who helped make things go smoothly during my 5 years here at UCR. This largely includes the administrative staff working in the psychology department office whose work is so crucial but often unnoticed. This includes Conrad Colindres for his help with copying, getting keys, getting books, and general problem solving. This also includes Ryan Lipinski in the undergraduate advising office who often saved me from having to deal with unruly students. A special thanks must be made to Faye Harmer and Dianne Fewkes who have been here all 5 of my years at UCR. I have enjoyed many conversations with them and

they have provided psychological support at all the right times (not to mention loads of laffy taffy!). I cannot help but feel that I was extremely “lucky” in my teaching assignments and in the selection of graduate students to help with recruitment weekend. I hope that I was able to use such “luck” to benefit the future of psychology graduate program at UCR.

And now I must turn to more personal acknowledgments. Humans are social creatures and with social needs. During my time at UCR I have had the great fortune of having one of my cohort members becoming one of my best friends. Ryan Rush and I have spent countless hours together over the past 5 years. Whether those hours were spent grabbing lunch, moving furniture, drinking beers, driving across the state, or—on more than one occasion—in heated disagreements, I have enjoyed them all. Ryan is one of the most considerate people I have ever met, always thinking about how other people might feel and giving way more than he takes in return. Everyone should be so fortunate as to have a friend like Ryan.

On another personal acknowledgment, Chris Nave has been especially important to my academic career thus far. One might suspect that two people arriving in graduate school at the same time, working in the same lab, and eventually competing on the job market at the same time might not get along very well. However, in our case nothing could be further from the truth. Over the past 4 years I have greatly benefited from having Chris as a labmate. When my motivation was lacking, Chris was there to keep pushing me. When my literature review skills were lacking, Chris was there to scour the literature for just the right citations or quotes. Perhaps most importantly, when I deleted

the most crucial of emails, Chris was there to forward the copy he had wisely saved to me. Our complimentary research abilities and interests no doubt led to successful graduate careers. It is my hope that we can continue our active research partnership in the years ahead.

Lastly, I must give my most special acknowledgment to the most special person in my life, my wife Georgena. No other person on earth would have made the sacrifices and taken the risks she took to be with me. Asking someone to move across the country with you, away from her family, for five years was no easy task for me, yet it must have been a million more times difficult to say yes. From a financial standpoint, Georgena has made getting my Ph. D. easier. I see my colleagues struggle financially to balance their budgets with the meager graduate student pay all the time. I have hardly known such struggles thanks to Georgena's hard work. When we arrived in California she had no sales experience whatsoever and as we prepare to leave she is one of the top sales representatives for a fortune 500 company. This accomplishment speaks to her incredible work ethic and her dedication to us both. But most importantly Georgena's love and support has made getting my Ph. D. tremendously easier. She has listened to countless conversations about psychology, data analysis, students, and personality. All along the way she has provided me not only with skeptical feedback that has kept me on my toes, but also with support of my goal to get my Ph. D. and to pursue an academic career. More than any other person I can say that I could not have done this without her. This dissertation is for both of us.

## ABSTRACT OF THE DISSERTATION

Assessing Persons, Situations and Behavior:  
Implications for Consistency, Congruence and Construal

by

Ryne Anthony Sherman

Doctor of Philosophy, Graduate Program in Psychology  
University of California, Riverside, June 2011  
Dr. David C. Funder, Chairperson

Situations have important implications for behavior. Recognition of this obvious fact, coupled with the Person-Situation Debate, led to a surge of research on situations during the 1970s, but this research did not yield a useful technique for assessing or comparing the psychological properties of situations. After a hiatus in the 1980s and 1990s, research on situations has been recently reinvigorated (Reis, 2008; Wagerman & Funder, 2009), including the development of the Riverside Situational Q-Sort (RSQ: Wagerman & Funder, 2009). This dissertation puts the RSQ to the test in three different studies. In Study 1 the RSQ is used to assess psychological properties of situations participants experienced in their daily lives and to compute the degree to which those situations are similar to one another. The results indicate that participants behaved more consistently across those situations to the degree to which their situations were more similar. In Study 2 the RSQ is used to assess the properties of situations that promote congruence between one's personality and one's behavior. The results indicate that when a person is in psychological "weak" situations (Mischel, 1977; Snyder & Ickes, 1985) or in situations that promote autonomy, competence, and relatedness to others (Deci & Ryan, 1987), one



is more likely to behave in accordance with his or her personality. In Study 3 the RSQ is used to investigate the relationship between personality and unique perceptions of psychological properties of situations. The results indicate that people who are high in well-being tend to view situations they encounter in their daily lives as more positive than people who are low on well-being, or high in negative trait affectivity. Extraverts tend to believe that they are center of attention more so than introverts do. Open people tend to see aesthetic beauty, intellectual stimuli, and lifestyle and political concerns where less open people may not. And narcissists tend to see their situations as opportunities to show off and control others more often than less narcissistic persons do. Taken together, these studies demonstrate the usefulness of the RSQ for assessing psychologically meaningful properties of situations and for testing psychological theory.

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## Chapter 1 – Introduction

A person's behavior is importantly influenced by the situations he or she encounters (Lewin, 1951). Indeed, *persons*, *situations* and *behaviors* make up the three components of the psychological triad (Bandura, 1978; Funder, 2006). However, relatively little research to date has simultaneously attempted to measure all three components of this psychological triad and to examine the ways in which they related to one another. This is largely due to the fact that until very recently (Wagerman & Funder, 2008) no useful measure for quantifying the psychologically relevant aspects of situations existed (see Chapter 2 for a review of previous efforts). The lack of a tool for quantitatively describing the psychologically relevant properties of situations may have been caused by two things. First, while the tradition followed by many experimental social psychologists of manipulating a single situational (independent) variable and examining the manipulation's effect on a single behavioral (dependent) outcome has proven useful in many respects (e.g. studies of conformity, stereotypes, prejudice, etc.), it has not led to a useful taxonomy for describing situations in general (Frederiksen, 1972; Reis, 2008). Second, in some respects the definition of what is constituted by a situation and how situations ought to be conceptualized and measured has been fuzzy (again, see Chapter 2 for a review). Recently however, Wagerman and Funder (2008) provided a definition and conceptualization of situations that seems most useful for psychological research, so their key points are summarized here.

First, situations have psychological properties that exist independent of the perceptions of the people in them. That is, while certainly each person's unique view of his or her situational circumstances is important, "the analysis of any situation surely must begin with an attempt to specify the attributes of it that are psychologically relevant to people in general" (Wagerman & Funder, 2009, p. 30). Second, the most psychologically useful level for such an analysis of situations is at what Wagerman and Funder refer to as the "meso/canonical/consensual" level.<sup>4</sup> Block and Block (1981) noted that situations exist at an objective biological and physical level, an idiosyncratic level (as uniquely perceived by each individual), and at a "canonical" or consensually defined level. For example, the situation "listening to a lecture for a college course" has inarguable physical properties (temperature of the room, number of people present) as well as idiosyncratic impacts on each individual (some may find it boring while others, hopefully, find it interesting). But overall, nearly everyone who experiences or observes this situation would probably rate its psychological nature as including intellectual stimuli. Third, and building on Wagerman and Funder (2009), the psychological impact of situations can be thought of in terms of specific characteristics. The dictionary describes a situation as "the total set of physical, social, and psychocultural factors that act upon an individual in orienting and conditioning his or her behavior" (*situation*: Merriam-Webster's Medical Dictionary, 2007). Many psychologists have seemed to agree. Block and Block (1981, p. 87) referred to "psychological demand-qualities and

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<sup>4</sup> Note this level is a blend of what Gelfand (2007) refers to as the meso- level, what J. Block and Block (1981) refer to as the canonical level, what Saucier, Bel-Behar, and Fernandez (2005) refer to as the consensual level, and Murray's (1938) *alpha press*, which all seem to be roughly equivalent to one another.

structure”; Frederickson (1973, p. 22) described situations as a “set of circumstances”; and Vansteelandt & Van Mechelen (2004, p. 371) asserted that “situations may be characterized in terms of active psychological features.”

In addition to providing a clear definition and conceptualization of situations, Wagerman and Funder (2009) also provided a useful tool for quantifying the psychologically relevant properties of situations, namely the Riverside Situational Q-Sort (RSQ; Wagerman & Funder, 2009). The purpose of this dissertation is to put the RSQ to the test. In what follows I present three empirical studies employing the RSQ. Although they are presented as independent studies because they address different psychological questions, all three studies use the same participants and come from a single large-scale, NSF-funded (Funder, 2007), data collection project lasting over two years. It should be noted that the study presented in Chapter 2 is identical to the paper by Sherman, Nave, & Funder (2010a) published in the *Journal of Personality and Social Psychology*. The study presented in Chapter 3, at the time of this writing, is a paper that is currently under revision by the same authors (Sherman, Nave, & Funder, *under revision*). And lastly the study presented in Chapter 4 is a first draft of a paper that will ultimately include the same authors (Sherman, Nave, & Funder, *in prep*). In the interest of full disclosure it should be noted that at the present time the draft included in Chapter 4 was entirely written by myself with the exception of the introduction which heavily borrows from a funded NSF grant proposal to David Funder (Funder, 2011).

## *Overview*

In the following three chapters, this research attempts to answer three specific questions. Chapter 2 examines the relationship between situational similarity and behavioral consistency in participants' daily lives. This is an important area of examination because, "A *minimalist* implication of the idea that behavior is to any degree a function of the situation, is that behavior should be more consistent across two situations to the degree that they are similar" (Furr & Funder, 2004, p. 422, emphasis in original). Following this logic, the RSQ is used to examine situational similarity between 4 situations that participants' report encountering in their daily lives. Next, behavioral consistency is indexed across those situations based on participant reports of how they behaved in each situation using the Riverside Behavioral Q-Sort (RBQ: Funder, Furr, & Colvin, 2000). The prediction is that if situations truly do have a powerful influence on behavior, and if the RSQ adequately measures the behaviorally important psychological aspects of situations, then the degree to which situations are similar, as indexed by a situational similarity score, should be strongly correlated with the degree to which participants report behaving consistency, as indexed by a behavioral consistency score.

Chapter 3 examines the ways in which two psychological theories of situations—the Strong Situation Hypothesis (Mischel, 1977; Snyder & Ickes, 1985) and the degree to which situations meet one's psychological needs as defined by Self-Determination Theory (SDT: Deci & Ryan, 1987; 2000; Ryan & Deci, 2000)—moderate the relationship between personality and behavior. While a few discussions of the person-situation debate remain (Fleeson & Nofle, 2009; Funder, 2009b) they are merely reminiscences because

it is largely agreed upon today that personality is predictive of behavior (Ozer & Benet-Martínez, 2006; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). However, this chapter examines the idea that the ability of personality to predict behavior may depend on characteristics of the situation that the persons are in such that personality is less predictive of behavior in psychologically strong or non-Autonomous situations. Specifically, this research examines the degree to which participants behaved congruently—defined as the within-person correlation between 42 personality characteristics and 42 of their direct behavioral analogues—across four situations in their daily lives. Subsequently this research examines both personality (e.g. psychological adjustment) and situational (e.g. situation strength, SDT affordances) as moderators of the degree to which people behave in congruence with their personalities.

Chapter 4 analyzes the relationship between personality characteristics and unique perceptions, or construals, of situations. When considering what it is that makes people different from one another, one obvious place to look is differences in perception. Indeed, early personality theorists have indicated that large differences in personality may lie in the ways that people differentially perceive their social worlds (Allport, 1937; Murray, 1938). The research in this chapter demonstrates that personality is related to unique perceptions of situations that people encounter in their daily lives. Moreover, the results from this chapter demonstrate that people make such unique construals in predictable ways based on their personality traits (e.g. persons high on neuroticism see more threats and negativity).

Finally, Chapter 5 provides some concluding remarks including a discussion of what we have learned from these three studies. In addition, this chapter makes some predictions about what the immediate future may hold for research on situation assessment.

## Chapter 2 – Behavioral Consistency & Situational Similarity<sup>5</sup>

Situations powerfully influence behavior. This claim is a central tenet of social psychology (Ross & Nisbett, 1991); thousands of published studies demonstrate that even seemingly minor manipulations of situational variables can have major effects (Richard, Bond, & Stokes-Zoota, 2003). Still, psychology has learned surprisingly little about the behaviorally important properties of situations. Studies of situational variables almost uniformly focus on specific manipulations associated with single behavioral outcomes in order to test particular, theoretically-based hypotheses (Funder, 2009b). The traditional emphasis on hypothesis-testing bypasses questions concerning the definition of situations or serious investigation of their important attributes. As a result, after decades of experimental research, psychology still lacks a broad and widely accepted taxonomy of psychologically relevant situational characteristics, or a useful tool to assess them.

We are not the first to point this out. As Frederiksen (1972) put it, “the guiding principle in devising these experiments has naturally enough, usually been the hypothesis or theory being tested. Such work has not led to the construction of a taxonomy of situations” (p. 115). Thirty-six years later, Reis (2008) noted, “the field has yet to develop a clear, consensual definition or taxonomy of what situations are, how they might systematically be compared, and which ones are most influential in what ways” (p. 312).

This is not to say that researchers have completely neglected these issues. A fairly comprehensive—although perhaps already slightly dated—review of efforts to develop

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<sup>5</sup> This chapter has been previously published in full (see Sherman, Nave, & Funder, 2010a).

situational taxonomies was provided by Ten Berge and De Raad (1999), so we do not provide a full summary here. Instead we highlight important features of some of these earlier efforts as well as describe other taxonomies developed since their review.

First and foremost, a large number of previous attempts to create taxonomies of situations have fallen short in one important regard; they left researchers without a usable tool for quantifying the psychological properties of a broad range of situations or, as Reis (2008) noted, systematically comparing one situation to another. For example, some studies have exclusively focused on particular types such as “anxiety-provoking situations” (Endler, Hunt, & Rosentstein, 1962; Krahe 1986) or “academic study situations” (Magnusson, 1971). A taxonomy developed by such research is unlikely to widely generalize—a measure developed to assess the properties of “anxiety-provoking” situations, for example, may not be especially useful among situations that do not fall into this category.

In a more comprehensive effort, Van Heck (1984) used a lexical approach to identify words that could meaningfully fall into the sentence, “being confronted with a \_\_\_\_\_ situation.” A further series of ratings and factor analyses yielded 10 categories: interpersonal conflict, joint working, intimacy and interpersonal relations, recreation, traveling, rituals, sport, excesses, serving, and trading. In a similar vein, Edwards & Templeton (2005) used a dictionary and a separate database to find 1039 words that could complete “that situation was \_\_\_\_\_” or “that was a \_\_\_\_\_ situation.” These words were reduced through ratings and factor analysis to four factors called positivity, negativity, productivity, and “ease of negotiation.” A particularly interesting study by Yang, Read



and Miller (2006) applied the lexical approach to Chinese idioms that describe situational contexts (e.g. “too late for regrets” and “catching up from behind”) and reduced them through ratings and factor analysis to 20 hierarchically structured clusters all having to do with means of attaining goals. Although suggestions have been offered that efforts like these have the potential to yield methods for measuring properties of situations (Forgas & Van Heck, 1992), to our knowledge no such assessment device has actually been employed in published empirical research.

A different approach to classifying situations (Kelley, Holmes, Kerr, Reis, Rusbult, van Lange, 2003) used six dimensions derived from interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) singly and in combination to “define 20 of the most common situations encountered in ordinary social life” (Reis, 2008, p. 317). Using this approach, researchers can examine a given situation in relation to each of the six dichotomous dimensions and determine which are relevant, and then classify it into one of the 20 types. This work derives from a theoretical perspective that assumes all situations, or at least the most psychologically important ones (Reis, 2009), are essentially interpersonal. The taxonomy of interpersonal situations included in the resulting “atlas” (Kelley et al., 2003) is wide-ranging and impressive, but like most other efforts in this domain falls short, at present, of offering a usable assessment device. Moreover, while many behaviors in many contexts relate to interpersonal goals, some do not. An approach that is entirely interpersonal leaves no place for situations associated with solitary behaviors such as working hard on a term paper, meditating, driving to work, or exercising.

### *Behavioral Signatures*

Several recent research programs have turned to behavioral signature approaches, part of the Cognitive-Affective Processing System (CAPS: Shoda & Mischel, 1995), for understanding how persons and situations jointly predict behavior (e.g. Fournier, Moskowitz, & Zuroff, 2008; Shoda, Mischel, & Wright, 1994; Vansteelandt & Van Mechelen, 2004). Behavioral signatures are defined as relatively stable and discriminative *if...then...* patterns of behavior produced by the interaction between characteristics of the person and his or her situation (Shoda et al., 1994). Research using this approach has demonstrated reasonable stability of *if...then...* profiles using pre-specified behavioral variables across particular situations of interest (e.g. Shoda et al., 1994; Smith, Shoda, Cumming, & Smoll, 2009).

However, and as others have pointed out (e.g. Fournier, et al., 2008, 2009), the CAPS model does little to specify what it is that makes one situation different from or similar to another. That is, it does not include a description of the “active ingredients” of situations (Mischel & Shoda, 1995). One solution was proposed by Fournier and colleagues (2008, 2009). They created a measure of interpersonal situations using an 11x11 “interpersonal grid” based on the interpersonal circumplex model (Leary, 1957) such that the vertical dimension characterizes dominance vs. submissiveness and the horizontal dimension characterizes quarrelsomeness vs. agreeableness. Fournier and colleagues asked participants to rate each social interaction they experienced over the course of several weeks by marking the behavior of their primary interaction partner on the interpersonal grid. While this method usefully quantifies interpersonal aspects of

situations and has produced a number of interesting findings, it is limited in a similar way as the atlas by Kelley et al. (2003), in that it assesses only interpersonal situations and a limited number of psychological variables. It is not clear how this method might be used to assess situations where one is alone. Moreover, a number of other potentially important psychological properties of situations are not captured, such as, is the context potentially anxiety inducing? Does the context include aesthetic stimuli? Are minor details of a task important? To capture properties like these a more comprehensive measure is required.

In another approach stemming from the CAPS model, Van Mechelen and colleagues (Van Mechelen, 2009; Vansteelandt & Van Mechelen, 2004) employed multidimensional scaling to identify “types” of persons, or person-behavior profiles, based on behavioral responses to hypothetical situations. In an illustrative application, Vansteelandt and Van Mechelen (2004) demonstrated three meaningful person profiles for 10 “anger” responses (e.g., slams door, says nasty things, loses temper) in three hypothetical frustration inducing situations (e.g., a fellow student lost your 15 page exam paper and no other copy exists). While this method appears promising, it is not yet clear how adding more situations will impact the number of profiles retained. For example, would adding a fourth situation yield a fourth (or fifth?) person-behavior profile? In addition, this method is limited in that it only focuses on one potential dimension at a time. The three hypothetical situations used by Vansteelandt and Van Mechelen (2004) were selected based on pretests of the degree to which each provoked frustration. Other psychologically relevant characteristics remained unmeasured. However, in real world

situations it seems rarely the case that a single property solely determines an individual's behavior. For instance, the behavior of an individual in a situation that "entails frustration or adversity" might largely depend on whether or not "members of the opposite sex are present" or "a job needs to be done."<sup>6</sup>

Thus, despite some recent signs of progress, personality and social psychology still lacks a general method for assessing the psychologically important characteristics of situations. This state of affairs points to an odd imbalance. For nearly 100 years (cf. Woodworth, 1917) personality psychologists have recognized the importance of being able to quantify differences between individuals, and a large research literature offers literally thousands of tools for personality assessment. These assessment tools, in turn, can be used to predict a wide range of important behavioral outcomes (Ozer & Benet-Martínez, 2006; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). The assessment of situations lags far behind. The challenge for research on situations, therefore, goes beyond identifying dimensions or types, to developing a useful tool for situational assessment.

#### *The Riverside Situational Q-Sort*

The present article introduces a new instrument for assessing psychological properties of situations, the Riverside Situational Q-Sort (RSQ). A description of its development was provided by Wagerman and Funder (2009), so we highlight only the important differences from previous measures here. Unlike some previous attempts, the

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<sup>6</sup> The characteristics in quotes, as well as those mentioned near the end of the preceding paragraph, are included in the more comprehensive measure of situational properties introduced later in this article.

principal aim of the RSQ was not to identify *the* essential set of characteristics of situations. We also did not restrict our conception of a situation to a particular theoretical perspective (e.g., Fournier et al., 2008; Reis, 2008). The guiding principles in the development of the RSQ were 1) the instrument should be applicable to as wide a range of situations as possible, 2) the instrument should be able to quantify the degree of similarity or dissimilarity between any two situations across a wide range of psychological properties, and 3) the instrument should be related to important outcomes relevant to personality (e.g. behaviors, emotions).

The item content for the RSQ was originally inspired by the long-used and wide-ranging California Adult Q-sort (CAQ) for the description of personality developed more than 50 years ago by Jack Block and his colleagues (Block, 1978). For each of the personality descriptors in the CAQ, a description was written of an aspect of situational context that might tend to evoke the relevant behavioral tendency. For example, the CAQ item referring to characteristic talkativeness yielded the RSQ item “Talking is permitted, invited, or conventionally expected.” CAQ items pertaining to tendencies to experience or not deal well with anxiety yielded the RSQ item “Context is potentially anxiety-inducing.” Because of its comprehensive coverage and demonstrated utility for personality assessment, the CAQ provides a useful springboard for the development of situational descriptors. As will be considered in the discussion, other foundations for item content are possible and deserve exploration in future research.

The full set for RSQ Version 2.0 includes 81 items. The Q-sort format requires raters to place each into a forced, quasi-normal distribution (Block, 1978). The format has

some distinct advantages over conventional Likert-style response scales, in that it forces raters to choose a only a small subset of the items as highly characteristic or uncharacteristic of the target of assessment, with many more being placed in the middle as relatively irrelevant (e.g., Block, 1978; Funder & Colvin, 1991). This method prevents the manifestation of some rater response sets (e.g., acquiescence, extremity), and forces a rater to carefully consider each item, since each one is, in effect, compared with every other. For the version of the RSQ used in the present study (Version 2.0), the 81 items were sorted into nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) with the assigned distribution, respectively, 3, 6, 10, 14, 15, 14, 10, 6, and 3.

The current paper aims to put the specific content and method of the RSQ to a pragmatic test, by using it in research that addresses the following psychologically substantive questions: 1) To what degree do people report behaving consistently across situations? 2) To what degree do people find themselves in similar situations? 3) To what degree does personality and similarity between situations predict behavioral consistency?

*Behavioral Consistency*

The answer to whether or not people behave consistently across situation depends in part on the definition of consistency, and several possibilities have been offered (Fleeson & Nofhle, 2008; Furr, 2009; Lord, 1982; Ozer, 1986).<sup>7</sup> For instance, *absolute consistency* means always displaying the same behavior across time and situations. This type of consistency is not a fruitful target for research because there is scant evidence that

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<sup>7</sup> For more thorough discussions of the varieties of behavioral consistency see Fleeson and Nofhle (2008) and Ozer (1986).

absolute consistency exists (Fleeson, 2001) outside of cases of severe psychopathology (e.g., catatonic schizophrenia), or coma.

A more reasonable expectation is *rank-order consistency*, which personality psychologists often focus on because it reflects the stability of individual differences, and more generally points to the coherence of personality. Rank-order consistency requires that an individual's enactment of behaviors remains at the same level relative to others although absolute levels may change. For instance, Funder and Colvin (1991) demonstrated that behavior can manifest high rank-order consistency from one laboratory context to another— people who exhibited relatively expressive nonverbal behavior in a getting-acquainted conversation were also relatively expressive in a debate context ( $r = .53$ )—and that this kind of consistency is *not* incompatible with mean level behavior change across the contexts. Despite their high rank order consistency, participants were, on average, significantly more nonverbally expressive in the debate than in the getting-acquainted conversation. Oishi (2004) obtained similar findings in a cross-cultural study, showing that rank-order consistencies of positive mood among both American and Japanese participants were fairly high across a variety of contexts even though strong and predictable patterns of mean differences were found across contexts and cultural groups.

However, the degree to which *individuals* behave consistently across situations does not concern rank-order consistency because this type of consistency does not involve comparisons between people. Instead, the subject matter is a third kind of consistency, within-person behavioral consistency, also referred to as person-centered or *ipsative consistency*. Ipsative consistency is defined as “the enactment of behavior

maintaining the same relative position compared to other enactments of behavior” (Fleeson & Nofhle, 2008, p. 1362). Ipsative consistency has rarely been measured by personality psychologists despite its fundamental importance (Fournier, et al., 2008), most likely because it requires the simultaneous measurement of at least several and preferably many behaviors in each situation of interest (for an exception, see Fleeson, 2001, who demonstrated high ipsative consistency of reports of behaviors relevant to the Big Five personality traits over time and context). Ipsative consistency is independent from rank-order consistency, in principle, because its measurement is based on comparisons of behavior across situations, within individuals, rather than comparisons between individuals, within situations.<sup>8</sup> In other words, the assessment of one individual’s level of ipsative consistency does not depend upon what anybody else does (Lamiell, 1981).

The concept of ipsative consistency highlights the importance of the situation. To some degree, every individual changes what he or she does while moving from one situation to the next, and it is straightforward to expect that ipsative consistency will be lower to the degree that the two situations are psychologically different. Although the relationship between situational similarity and behavioral consistency may seem intuitive, empirical demonstrations have included just a few laboratory experiments (e.g., Borkenau et al., 2004; Furr & Funder, 2004) and are even more rare in ecologically representative (i.e., real world) situations (e.g., Fournier, et al., 2008; Krahe, 1986). A

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<sup>8</sup> The conceptual independence of ipsative and rank-order consistency does not necessarily mean the two are empirically unrelated. It just means there is no *necessary*, mathematically compelled relation between the two.



central purpose of the present study is to examine the relationship between situational similarity and ipsative behavioral consistency—hereafter referred to simply as behavioral consistency—in real world contexts.

It is important to extend research on cross-situational consistency into participants' contexts of daily life because experimental methods are particularly limited in their ability to address this topic. Most social psychology experiments are—by design—characterized by situational pressures that limit an individual's ability to display a wide range of behaviors. Indeed, experimental manipulations are typically intended (and pretested) to determine participants' behavior, not to allow it free rein. Also typical of experimental studies is that only a very few behavioral dependent variables are observed and recorded—in fact, more often than not, just one. One distinctive—and necessary—aspect of the present research is that it includes measurements of a wide range of behaviors. Finally, few experimental studies observe participants in more than one situation—the *sine qua non* for the assessment of consistency. The present study includes four.

### *Situational Similarity*

“A *minimalist* implication of the idea that behavior is to any degree a function of the situation, is that behavior should be more consistent across two situations to the degree that they are similar” (Furr & Funder, 2004, p. 422, emphasis in original). While this idea might seem intuitively obvious, as was mentioned above, it has been suggested elsewhere that “links between situational similarity and consistency individual differences across situations” have been “often expected but rarely attained” (Shoda,

Mischel, & Wright, 1993, p. 1023). For example, Lord (1982) found that consensual ratings of situational similarity were not able to predict cross-situational consistency in conscientious behavior.

Findings like these motivated the study by Shoda et al. (1993), which found that behavioral consistency could be predicted, in part, from the degree to which the different situations demanded similar kinds of competencies. They were also the impetus for two studies reported by Furr and Funder (2004).<sup>9</sup> In Study 1, participants experienced two situations that were objectively identical – in both, they sat on a couch with an opposite sex stranger for five minutes. Furr and Funder demonstrated that the degree to which participants subjectively viewed these situations as similar or different predicted their degree of behavioral consistency across them (perceptions of greater dissimilarity were associated with less cross-situational consistency). In Study 2, Furr and Funder assessed the objective similarity of situations in terms of two specific aspects, the identity of the interaction partner and the nature of the experimental task. They found that behavior was more consistent across objectively similar situations (for details see Furr & Funder, 2004). The effect of both subjective and objective situational similarity on behavioral consistency was so powerful that Furr and Funder stated it “nearly qualifies as a law of human behavior” (p. 443). However, these findings represent only a first step. Study 2 defined objective situational similarity in terms of only two elements, and both studies examined behavior within experimentally contrived situations, which means the

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<sup>9</sup> Furr and Funder used the term person-centered rather than ipsative in their paper and we consider the terms inter-changeable in this context.

generality of the findings to ecologically representative contexts—such as the participants’ ordinary, daily activities—remains to be established.

More generally, a drawback to assigning participants to experimental situations—standard practice in much research including that of Furr and Funder—is that it bypasses situation selection effects (Ickes, Snyder, & Garcia, 1997). For instance, consider a dynamic interactional model that views persons, situations, and behavior as reciprocal causes of one another (Bandura, 1978; Eaton & Funder, 2005). In this view, people in their everyday lives ought to behave even more consistently than in contrived experiments because they will tend repeatedly to find themselves in the same or similar situations. To investigate this and related possibilities, the present study asked each participant to describe four situations he or she had recently experienced in daily life. In addition, the current study indexed situational similarity not only from participants’ own ratings, but also from independent raters who provided a more detached viewpoint.

### *Personality*

Personality research often uses trait ratings to predict particular behaviors or outcomes of interest. In addition, the rank-order consistency of behavior across multiple time points and contexts may be assessed and, if found, viewed as evidence for the cross-contextual influence of personality. However, it is possible that some people are more consistent than others. For example, consider one person who arrives at work each morning in a cheerful and sociable mood and engages her co-workers in conversation, compared to another person who sometimes arrives in an equally positive frame of mind but who occasionally, and from her coworkers’ point of view unpredictably, begins the

day with expressions of hostility and unfriendliness. The first person's behavior is more consistent than the second and co-workers may say, about the second person, "I wonder which Mary will show up this morning?"

Observations like these raise two questions. First, are there important individual differences in the degree to which people respond consistently to situations over time and across contexts (Bem & Allen, 1974)? If the answer is yes, then a second question becomes, what underlying personality traits are associated with individual differences in consistency?

Studies measuring consistency of particular behaviors across situations have not been able to clearly distinguish and replicate personality characteristics of consistent and inconsistent individuals (Bem & Allen, 1974; Chaplin, 1991). When examining a more broad range of behaviors, however, previous theoretical reviews and empirical evidence suggest that in Western societies, consistent individuals tend to display positive characteristics related to good mental health (Allport, 1955; Block, 1961; Donahue, Robins, Robert, & John, 1993).<sup>10</sup> To our knowledge, the only examination of such possible relationships between ipsative behavioral consistency and personality is found in unpublished data included in a dissertation by Furr (2000).<sup>11</sup> In the two laboratory experiments reported subsequently by Furr and Funder (2004), consistency in directly observed behavior from one situation to another was related to social competence, ego

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<sup>10</sup> Some theory and research suggests that within Eastern, collectivist cultures, consistency is not associated with psychological adjustment (e.g., Church 2009; Suh, 2002; see also Markus & Kitayama, 1998).

<sup>11</sup> These laboratory experiments were described by Furr and Funder (2004), but the specific results described here only appeared in Furr (2000).

resiliency and psychological adjustment. However, these associations were identified in experimental interaction contexts that were not of the participants' choosing. The present study examines the question of *who is more consistent* in participants' contexts of daily life.

### *Hypotheses*

In order to clarify the relations among situations, persons, and behaviors, the present study tests four hypotheses:

*People will report consistent patterns of behavior across four situations sampled from their daily lives.* Behavioral consistency was the center of controversy during the person-situation debate (Kenrick & Funder, 1988), and a wide literature developed on this topic. Some of the most convincing evidence came from the work of a) Epstein (1979) who showed that aggregated (averaged) behaviors across multiple contexts are highly predictable by personality traits, b) Funder and Colvin (1991) who demonstrated that behavioral consistency can be fairly high across three laboratory settings despite mean level changes in behavior across the settings, c) Fleeson (2001) who demonstrated that mean reports of behaviors relevant to the Big Five personality traits are stable over time and context, and d) Borke and colleagues (2004) who demonstrated consistent behavior across a range of experimental tasks.

*The four situations sampled from each participant will be relatively similar.* One explanation for behavioral consistency in everyday life is that people can to some extent choose the situations they experience, by seeking out some and avoiding others (Ickes et al., 1997). For example, it has been proposed that people tend to seek out situations that

maintain their self-conceptions (Swann, 1987). People also affect or even create the situations they experience. A highly disagreeable person, for example, might repeatedly find himself or herself in situations fraught with hostility. Therefore, the second hypothesis is that the four situations experienced by a single participant will tend to be described more similarly to each other than to situations experienced by different participants. Similarity will be examined using both subjective accounts of the psychological properties of situations as well as more objective accounts provided by independent raters.

*Situational similarity will strongly predict behavioral consistency.* If situations are indeed important determinants of behavior, there should be an association between situational similarity and behavioral consistency: self-reported behavior should be more consistent across situations to the degree that the situations are similar. Support for this hypothesis would replicate the situational similarity effect found in the laboratory by Furr and Funder (2004) in a more ecologically representative setting. In addition, the current study will investigate the degree to which assessments of similarity based on subjective and relatively objective descriptions of situations provide independent routes toward predicting behavioral consistency.

*Personality will be associated with behavioral consistency over and above the effect of situational similarity.* One person's behavior may tend to be more consistent across situations than another's (Bem & Allen, 1974), even when both are faced with equally similar (or dissimilar) situations. If this hypothesis is supported, a second question will arise: What personality characteristics are associated with behavioral

consistency? Utilizing an ipsative approach to behavioral consistency, the current study will attempt to replicate findings by Furr (2000) that consistent people tend to be socially competent and psychologically well-adjusted. The multi-ethnic nature of our participant pool will allow a further investigation as to whether this relationship is attenuated among participants of Asian ethnicity, as some past research might suggest (e.g. Church, 2009; Suh, 2002).

## Methods

### *Participants*

Two-hundred twenty undergraduate participants from the University of California, Riverside were solicited via fliers on campus and through an online university psychology participant pool. Data collection began in fall, 2007 and concluded in spring, 2009. Because this study focuses on behavioral consistency over multiple time points, only participants who completed all sessions were retained for analyses. As a result, 14 participants were dropped because they attended only session 1 (N=12) or sessions 1 and 2 (N=2). In addition, 3 participants completed the study twice; data from their second participation was dropped. Finally, 1 participant was dropped for suspicion of random reporting. This left a final sample of 202 (105 Female, 97 Male) participants, on whom the following analyses are based. Because of missing data on some measures, the Ns for particular analyses vary slightly. The ethnic breakdown of the final sample was: 37% Asian, 27% Hispanic/Latino, 13% Caucasian, 13% Other, 8.5% African American, and 1.5% No Response. The participants were compensated \$12.50 per hour, with a maximum payment of \$75.00 if they completed all sessions.

### *Procedure*

Participants came to the laboratory for a total of five visits over the course of five weeks. The visits were at least 48 hours apart. On the first visit, participants received information about the study and completed demographic questionnaires and several personality measures (see Measures section below). On the subsequent four visits participants were asked to describe a situation they had been in the day before at one of four pre-specified times (10am, 2pm, 5pm, or 9pm) by writing down what they were doing on a 3x5 index card.<sup>12</sup> Participants were instructed to specify only one situation. For example, if the participant said that at 2 pm she was playing softball and then going to dinner with friends, we asked the participant to revise to specify only one of these. In addition, participants were instructed that if they were sleeping at the indicated time they should write down what they were doing right before they went to sleep or right after they woke up. Participants were next asked to describe the psychological characteristics of that situation with the Riverside Situational Q-Sort Version 2.0 (RSQ: Wagerman & Funder, 2009) using a computer based Q-sorter program developed in our lab.<sup>13</sup> Participants were then asked to describe how they acted in that situation with the Riverside Behavioral Q-Sort Version 3.0 (RBQ: Funder, et al., 2000; Furr, Wagerman & Funder, 2010), also using the computer based Q-sorter program.

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<sup>12</sup> Because each participant completed four visits and four times were used, the time x visit effects were completely confounded within participants. To counteract this, a modified Latin-square design was used such that approximately 1/4<sup>th</sup> of the participants completed the study using each of the following time sequences: 10am-2pm-5pm-9pm; 2pm-5pm-9pm-10am; 5pm-9pm-10am-2pm; 9pm-10am-2pm-5pm.

<sup>13</sup> Go to <http://rap.ucr.edu/qsorter/> for more information about this program and a free, downloadable copy. This website also includes complete lists of the CAQ, RSQ, and RBQ items used in the present study.



## *Measures*

*Big Five Inventory.* The Big Five Inventory (BFI: John & Srivastava, 1999) consists of 44 items that assess the global personality traits of agreeableness, conscientiousness, extraversion, neuroticism, and openness. Each item is rated on a five-point Likert scale (1 = *disagree strongly*, 5 = *agree strongly*) using a computerized testing format. The alpha reliabilities of the five composites from the 202 person sample were as follows: agreeableness = .78, extraversion = .85, conscientiousness = .82, neuroticism = .80, and openness = .73.

*California Adult Q-Sort.* The California Adult Q-Sort (CAQ: Block, 1978; as modified for use by non-professionals by Bem & Funder, 1978) contains 100 diverse personality characteristics (e.g., “Is genuinely dependable and responsible”; “Has a wide range of interests”). Using the Q-sorting computer program, each participant assessed his or her own personality using the modified CAQ by placing each of the items into one of nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) forming a forced choice, quasi-normal distribution.

*Riverside Situational Q-Sort.* The Riverside Situational Q-Sort Version 2.0 (RSQ: Wagerman & Funder, 2009), comprises 81 diverse characteristics of situations (e.g., “Talking is permitted, invited, or conventionally expected”; “Context is potentially anxiety-inducing”). During visits 2-5 to the lab, each participant assessed the situation he or she reported being in at a particular time the day before by placing each item into one of nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) according to a forced choice, quasi-normal distribution, using the Q-sorting computer

program. As was mentioned above, the number of items placed in each category was 3, 6, 10, 14, 15, 14, 10, 6, and 3 for categories 1-9 respectively. Thus, as is typical of the Q-Sort method, participants are forced to decide which few items are the most and least characteristic of the situation while the majority of less relevant, or even irrelevant, items are left to the middle categories.

*Riverside Behavioral Q-Sort.* The Riverside Behavioral Q-Sort Version 3.0 (RBQ-3.0: Funder, et al., 2000; Furr, et al., 2010), is a 67-item assessment tool designed to describe the range of a person's behavior. Items include "appears relaxed and comfortable," "is expressive in face, voice and gestures," and "tries to control the situation." During each return visit to the lab, and after completing the RSQ, each participant assessed his or her own behavior in the situation he or she reported being in at a particular time the previous day. This was done, using the Q-sorting computer program, by placing each of the 67 items into one of nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) forming a forced choice, quasi-normal distribution. While data derived from direct observations of behavior is generally preferable (Furr, 2009), the impracticality of gathering multiple observer reports of 67 behaviors from multiple time points in a participant's daily life necessitated the use of self-reports. This issue is addressed further in the discussion.

*Independent Situational Ratings.* Although in this study it was not possible to view the participants' situations directly, we sought independent ratings that could help provide a window into the ways that others might view situations differently than did the participants themselves. As will be recalled, during visits 2-5 participants began by

describing where they were at a specified time the previous day on a 3x5 card. Of course, these descriptions are, in a sense, already filtered through the participants' point of view. However, nearly all are in fact quite straightforward descriptions of objective aspects of situations (e.g., "I was just finishing my midterm for Psych 1," "Making dinner for me and my boyfriend"; see Table 1-1 for more examples) that still leave room for differences in subjective response.

Four research assistants, from a total pool of 22, independently read and rated each situation using the RSQ. As a means of quality control (and similar to practice with the RBQ: Funder et al., 2000), the four ratings for each situation were examined for profile agreement and retained if the average agreement exceeded  $r = .23$ , which is an empirical estimate of the profile agreement between two randomly paired situations. For approximately 50 situations, from the 810 total, a rating with low agreement was dropped and an additional rating was completed. The four ratings were then averaged to form a composite, independent rating of the psychological properties of each situation. The average profile agreement amongst raters of the same situation is  $r = .49$  ( $SD = .08$ ), yielding an average alpha for the rater composites of  $.79$  ( $SD = .06$ ).

#### *Quantifying Behavioral Consistency and Situational Similarity*

The previously described methods yielded, for each participant, four descriptions of situations using their own ratings with the RSQ, four self-reports of behavior using the RBQ, and four independent ratings of situations using the RSQ. Thus, six similarity (or consistency) coefficients from each group of descriptions can be computed for each participant (i.e., Situation 1 paired with 2; 1 with 3; 1 with 4; 2 with 3; 2 with 4; 3 with

4). For example, for participant 001 the behavioral consistency between his or her first and second situations is indexed by correlating his or her scores on the 67 behaviors measured in the first situation with his or her scores on the same 67 behaviors measured in the second situation. The six profile correlations—sometimes called person-centered or within person correlations—were calculated for each participant with full data, one for each possible pairing of the four situations. These six correlations were calculated for each participant using his or her own RSQ ratings (as indices of situational similarity), his or her RBQ ratings (as indices of behavioral consistency), and the independent RSQ ratings (as a second set of indices of situational similarity). The average of the six RSQ profile correlations from self-ratings of the RSQ, the six profile correlations from the self-ratings of the RBQ, and the six profile correlations from the independently rated RSQs were computed for each participant yielding an index for average situational similarity based on participant descriptions, an index for average behavioral consistency, and an index for average situational similarity based on independent ratings.<sup>14</sup>

It is important to make clear that the first two of these indexes are *not* simply self-reports of how similar the participants thought the situations or their behaviors were across the four contexts. Instead, the participants provided separate descriptions of *each* of the four situations they experienced and their behavior in them, one situation each day, several days apart over the course of four weeks. Situational and behavioral similarity scores were computed from these descriptions. The similarity among the independent ratings of the participants' situations was similarly derived.

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<sup>14</sup> All analyses were performed using r-to-Z transformations where appropriate; however, we report the back-transformed *rs*.

## Results

### *Situation Content*

To give the reader a sense for the content of the situations participants reported, Table 2-1 presents a list of 10 situations randomly chosen out of the total pool of 810. For each situation, Table 2-1 also includes the three RSQ items that the participant rated as most and least characteristic.<sup>15</sup>

Table 2-1.  
Randomly Sampled Situations and Items Rated Most and Least Characteristic.

| Situation  | <i>Extremely Characteristic</i> (9)  | <i>Extremely Uncharacteristic</i> (1)  |
|--|--|--|
| Playing games at a friend's apartment                            | 03 - Talking permitted, invited, or expected<br>09 - Potentially enjoyable<br>72 - Raises power issues               | 08 - Uncertain/complex<br>78 - Others occupy various social roles<br>79 - P is pressured to conform                  |
| Yesterday at 9pm I was at home with my friends                   | 24 - Involves competition<br>69 - Simple/clear-cut<br>70 - Allows expression of charm                                | 08 - Uncertain/complex<br>33 - Potential undermining/sabotage<br>06 - Evokes lifestyle/political values              |
| I was taking a midterm   | 07 - Can demonstrate intellectual capacity<br>62 - Allows expression of ambition<br>76 - Can be emotionally arousing | 10 - Another is under threat<br>14 - Playful<br>32 - Evokes warmth/compassion  |
| Playing softball at my local park with my sister and her friends | 02 - Counted on to do something<br>03 - Talking permitted/invited/expected<br>09 - Potentially enjoyable             | 06 - Evokes lifestyle/political values<br>07 - Can demonstrate intellectual capacity<br>10 - Another is under threat |
| I went to my Entomology discussion.                              | 47 - Includes intellectual stimuli<br>69 - Simple/clear-cut<br>77 - Allows for verbal fluency                        | 10 - Another is under threat<br>16 - One is unhappy/suffering<br>66 - Can arouse feelings of self-pity               |

<sup>15</sup> To get an even better feel for how the RSQ describes situations, we invite the reader to go to <http://rap.ucr.edu/qsorter/> and to download the Q-sorter program, the RSQ deck, and the instructions file. Then think of a situation you recently experienced and try sorting it yourself.

|  |   |  |
|--|---|--|
| I just finished class and was walking back to the dorm with Diana                                  | 03 - Talking permitted/invited/expected<br>29 - Pos. or Neg. impression possible<br>45 - Close relationships present or could develop | 10 - Another is under threat<br>33 - Potential undermining/sabotage<br>37 - Potentially threatening                        |
| I was watching TV  | 09 - Potentially enjoyable<br>51 - Is or potentially is humorous<br>67 - Opposite sex is present                                      | 10 - Another is under threat<br>11 - Is being criticized<br>42 - Could entail stress or trauma                             |
| Making dinner for me and my boyfriend  | 23 - A job needs to be done<br>49 - Allows for immediate gratification<br>53 - Includes sensuous stimuli                              | 38 - Raises moral/ethical concerns<br>64 - Allows for sexual construal of stimuli<br>66 - Can arouse feelings of self-pity |
| Studying English Class by myself in my dorm room without my computer on, in the A&I residence hall | 07 - Can demonstrate intellectual capacity<br>79 - P is pressured to conform<br>80 - Success requires cooperation                     | 10 - Another is under threat<br>28 - Phys. attractiveness salient<br>70 - Allows expression of charm                       |
| I was just finishing my midterm for Psych 1  | 07 - Can demonstrate intellectual capacity<br>47 - Includes intellectual stimuli<br>69 - Simple/clear-cut                             | 03 - Talking permitted, invited, or expected<br>14 - Playful<br>28 - Phys. attractiveness salient                          |

Note. RSQ Item content is abbreviated. Situations were chosen randomly from the total sample of 810 situations. RSQ Item numbers are listed in front of the abbreviated content.

To identify meaningful clusters, or types of situations, we conducted an exploratory inverse principal components analysis, wherein the 810 situations served as “variables” and the 81 items served as “participants,” on the composite independent ratings of the situations. Using a direct oblimin rotation with a step-up approach (Rosenthal & Rosnow, 2008) we examined solutions for 1-8 possible rotated components (first 8 eigenvalues = 379.53, 118.95, 44.71, 29.85, 19.59, 16.82, 16.06, 12.04). We examined the component loadings and the scoring coefficients for each of the rotated solutions for clarity and ultimately settled on a 7 cluster solution accounting for 77% of the variance. We provisionally labeled these clusters I – Social Situations (e.g., “eating lunch with 2 friends on campus”; “hanging out with some friends”), II – School work in class with others (e.g., “sitting in Perception class at the UV with friends/classmates;” “I was in class”), III – School work at home or alone (e.g., “studying in my dormroom by myself;” “I was typing up an English paper that was due”), IV – Recreating (e.g., “I was at my dorm with my friend Sean, playing video games;” “I was playing tennis at UCR rec center with three of my friends”), V – Getting ready for something (e.g., “I went to the bathroom and took a shower and brushed my teeth;” “I was taking a shower and getting ready”), VI – Work (e.g., “at work for Dining Services in the Commons;” “I was at work”), and VII – Unpleasant Situations (e.g., “I was looking for my cell phone, thinking I had lost it;” “I was at the UCR health center because I had a severe flu”).

As a means for estimating the number of situations in each of these clusters, we considered each situation a member of the cluster in which it had the highest principle component loading. Approximately 36% of situations loaded most highly on the social

cluster, 19% on the school work in class cluster, 14% on the school work at home or alone cluster, 13% on the recreating cluster, 11% on the getting ready for something cluster, 4% on the work cluster, and 3% on the unpleasant situations cluster. This exploratory analysis is only meant to illustrate the diversity of the situations participants reported and is not considered further in the present article.

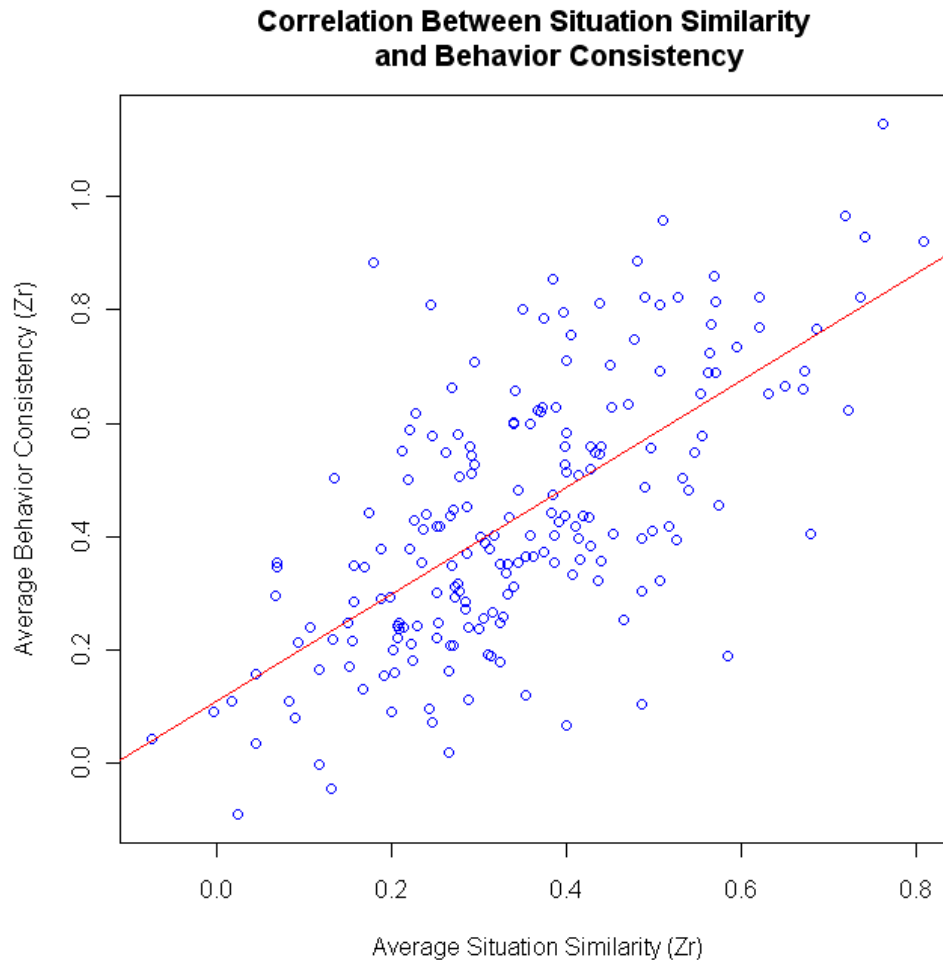
### *Hypotheses*

To test the first hypothesis—that people will report consistent patterns of behavior across four situations sampled from their daily lives—it is necessary to establish a baseline level of behavioral consistency. A certain amount of apparent consistency can be expected simply because some behaviors included in the RBQ are rarely displayed even across all situations and people (e.g., “tries to undermine, sabotage or obstruct”) while others are quite common (e.g., “appears relaxed and comfortable”), which artificially inflates the six coefficients used to create the average consistency index. To estimate this baseline, the RBQ profile correlations were computed across all possible pairs of profiles in the data set (across and within participants) and then averaged. This technique resembles the correction for normativeness in profile similarity described by Furr (2008). The baseline level of behavioral consistency across all possible behavioral profiles was  $r = .23$ , ( $SD = .24$ ). The average behavioral consistency within participants was  $r = .41$  ( $SD = .23$ ) and a one-sample  $t$ -test, with the null hypothesis  $\rho = .23$ , confirmed that within person behavioral consistency is greater than the baseline,  $t(200) = 12.14$ ,  $p < 2.2 \times 10^{-16}$ ,  $r = .65$ . Thus, this hypothesis is supported.



A similar analytic approach was used to test the second hypothesis, that the four situations sampled from each participant would be similar. First, a baseline level situational similarity coefficient was computed by correlating all possible pairs of situation profiles (across and within participants), then a one-sample *t*-test was conducted to compare the average within person situational similarity to the baseline level. The average within-person similarity among participant-provided descriptions of situations ( $r = .33$ ,  $SD = .16$ ) was greater than the baseline ( $r = .20$ ,  $SD = .18$ ),  $t(201) = 12.12$ ,  $p < 2.2 \times 10^{-16}$ ,  $r = .65$ . In addition, this finding was replicated using the situational similarity index derived from the independent descriptions. Once again, a baseline level situational similarity coefficient was computed by correlating all possible pairs of independent situation profiles (across and within participants) and this was used as the null hypothesis for a one-sample *t*-test. The average within person situational similarity derived from independent descriptions ( $r = .52$ ,  $SD = .19$ ) was greater than the baseline ( $r = .45$ ,  $SD = .22$ ),  $t(202) = 6.73$ ,  $p = 1.695 \times 10^{-10}$ ,  $r = .43$ . Thus, the second hypothesis is supported by indexes of situational similarity derived both from the participant's own descriptions and by independent ratings.

To test the third hypothesis—that situational similarity will strongly predict behavioral consistency—two analyses were conducted, one between participants and the other within participants. First, the correlation between the behavioral consistency index and the situational similarity index based on the participants' descriptions was computed. As anticipated, this correlation was strong and positive,  $r = .66$ , 95% CI [.58, .74],  $t(199) = 12.56$ ,  $p < 2.2 \times 10^{-16}$ . The scatter plot with regression line is displayed in Figure 2-1.



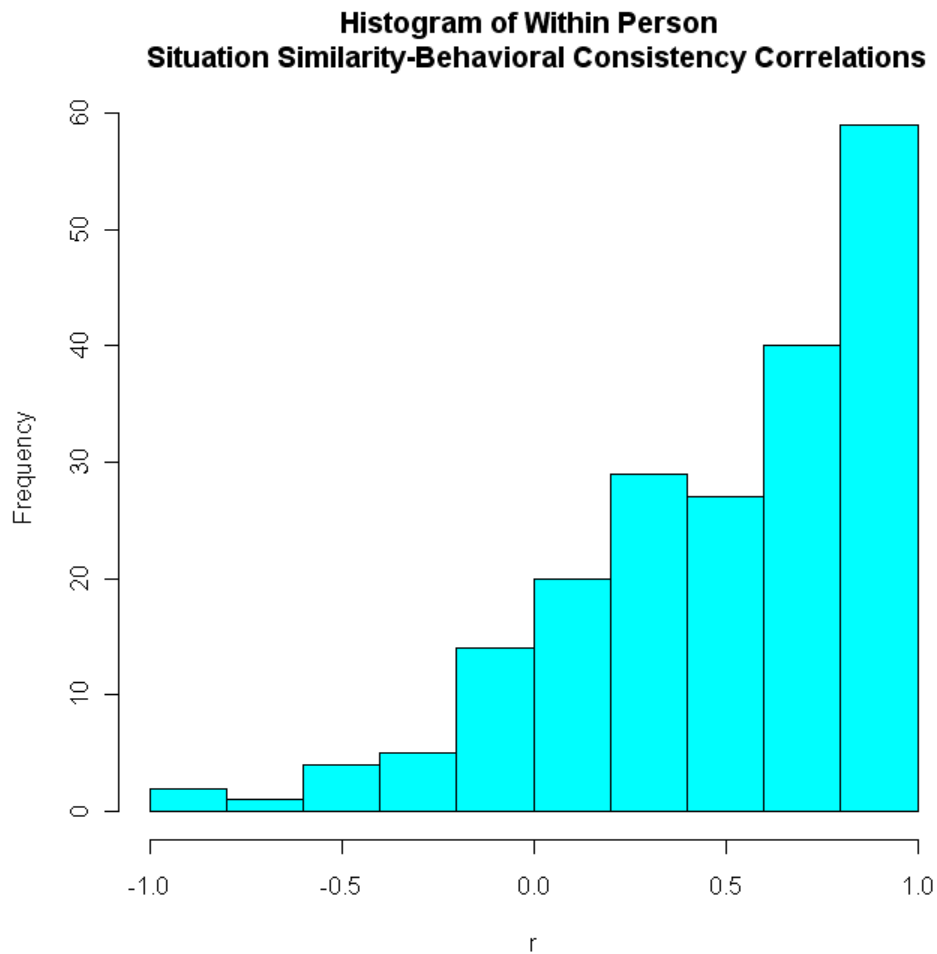
*Figure 2-1.* Scatter-plot and regression line predicting average behavioral consistency from average situational similarity.

People who experienced more similar situations, on average, also reported more behavioral consistency, on average. This finding was robust across gender (Females  $r = .62$ , Males  $r = .69$ ) and ethnicity ( $r_s = .84, .72, .51, .64$ , and  $.68$  for participants indicating African American, Asian, Caucasian, Hispanic, and Other ethnicities respectively). This result was replicated using the situational similarity index derived from independent descriptions as well,  $r = .33$ , 95% CI [.20, .45],  $t(200) = 4.92$ ,  $p = 1.77 \times 10^{-6}$ .

This hypothesis was also tested in a within-subjects fashion. Recall that each participant had six behavioral consistency correlations and six situational similarity correlations based on the participant's own descriptions of the situations (one for each pair of the four situations). If the hypothesis were correct, one would expect these two sets of six correlations to covary in a strong and positive fashion within each participant. That is, if participant 001 described situations 1 and 2 in a similar fashion, his or her two behavioral reports ought to be similar as well. However, if the descriptions were highly dissimilar, then his or her behavioral reports would be expected to be dissimilar. Thus, for each participant a within person correlation across the six situational similarity and behavioral consistency pairs was computed, representing the degree to which the third hypothesis was true for each participant.<sup>16</sup> As anticipated, the average within person correlation was high,  $r = .63$  ( $SD = .60$ ) and is significantly greater than  $\rho = 0$ ,  $t(200) = 15.06$ ,  $p < 2.2 \times 10^{-16}$ . The histogram of these within person correlations is displayed in Figure 2-2.

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<sup>16</sup> This within person analysis was only conducted using the participant-reported RSQ ratings because the procedure for gathering independent ratings included a number of instances of the same rater assessing situations from the same participant. Therefore, an analysis using independently rated RSQ descriptions would confound individual rater biases with similarity effects in an indiscernible manner.



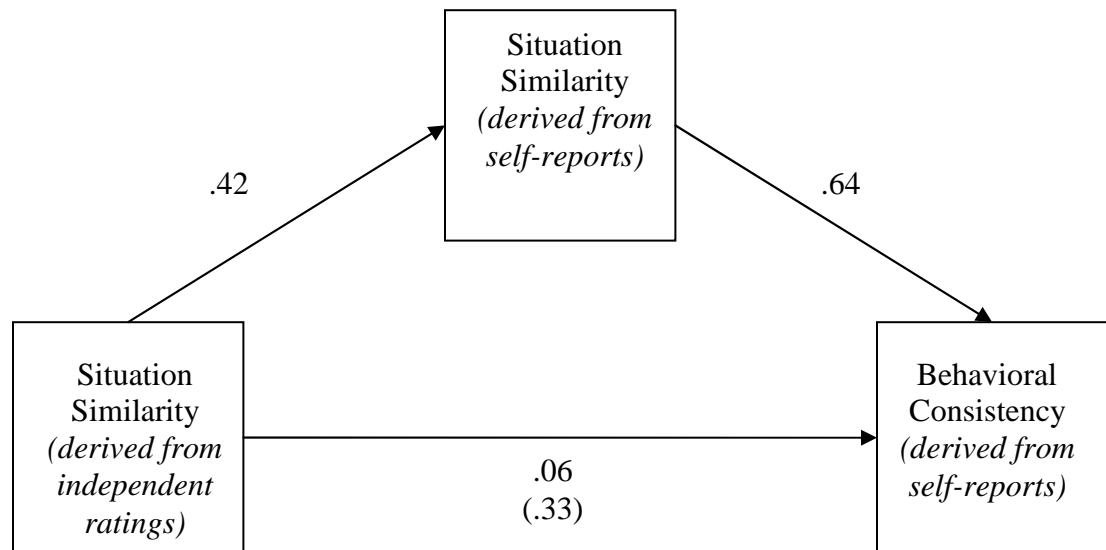
*Figure 2-2.* Distribution of within-person correlations between situational similarity and behavioral consistency.

As can be seen, over 87% of participants showed a positive relationship between the similarity of their situational descriptions and the consistency of their reports of behavior across the same situations, although a notable minority of participants (just under 13%) showed a negative relationship, with one participant displaying a surprising  $r = -.88$ . To summarize, both the between-subjects—from self ratings and independent ratings—and within-subjects analyses provide strong support for the third hypothesis.

We examined the basis of these findings with some follow-up analyses. With two different indexes of situational similarity in hand (based on the participants' and independent descriptions), both of which predict behavioral consistency, one might wonder whether these two indexes are measuring anything differently. That is, what is the agreement between these two measures? Further, given that both of these indexes predict behavioral consistency, one might also wonder whether each uniquely contributes to the prediction.

To answer the first question, we computed the correlation between the self-reported situational similarity index based on participants' descriptions and the situational similarity index based on the independent descriptions. This correlation was strong and positive,  $r = .42$ ,  $t(201) = 6.52$ ,  $p = 5.526 \times 10^{-10}$ , suggesting there is agreement amongst the participants and the independent raters as to which situations were on average most similar. However, a multiple regression predicting the behavioral consistency index from the two different indexes of situational similarity indicates that the relationship between situational similarity as indexed by the independent descriptions and behavioral consistency is nearly fully mediated by the index of situational similarity based on the participants' descriptions. As shown in Figure 2-3, although the bivariate relationship between situational similarity derived from independent descriptions and behavioral consistency is  $r = .33$ , when the index of situational similarity derived from the participants' own descriptions is added to the model as a mediator, the relationship is reduced to near zero ( $\beta = .06$ ). This analysis suggests that the relationship between situational similarity and behavioral consistency is almost entirely accounted for by the

degree to which the participants themselves see the situations as similar. Some possible explanations are considered in the discussion.



*Figure 2-3.* Mediation model showing that the relationship between situational similarity derived from independent raters' judgments of situational characteristics and behavioral consistency is nearly fully mediated by situational similarity derived from the participants' judgments.

To test the hypothesis that personality will be associated with behavioral consistency over and above the effect of situational similarity, self-reported CAQ personality characteristics were correlated with the behavioral consistency index (described above) after controlling for both indexes of situational similarity (based on the participants' and the independent situational descriptions). These results are displayed in Table 2-2.

Table 2-2.

CAQ Correlates of Self-Reported Behavioral Consistency Controlling for Self-Reported and independently rated Situational Similarity (abbreviated)

| <u>## - CAQ Item</u>                              | <u>Combined</u> | <u>Female</u>  | <u>Male</u>   |
|---|-----------------|----------------|---------------|
|   | <u>N = 202</u>  | <u>N = 104</u> | <u>N = 98</u> |
| <i>Positive Correlates</i>                        |                 |                |               |
| 07 – Favors conservative values                   | .21**           | .28**          | .16           |
| 84 – Is cheerful                                  | .19**           | .14            | .24*          |
| 70 – Behaves in ethically consistent manner       | .19**           | .05            | .30**         |
| 88 – Is personally charming                       | .15*            | .13            | .17           |
| 02 – Genuinely dependable person                  | .14*            | .13            | .18+          |
| 92 – Has social poise/presence                    | .14*            | .21*           | .08           |
| 33 – Calm; relaxed in manner                      | .13+            | .16            | .09           |
| 64 – Is socially perceptive                       | .13+            | .09            | .17+          |
| 93 – Behaves in gender consistent manner          | .12+            | .14            | .12           |
| 03 – Has a wide range of interests                | .12+            | .13            | .11           |
| <i>Negative Correlates</i>                        |                 |                |               |
| 45 – Brittle ego-defense system                   | -.19**          | -.16           | -.22*         |
| 61 – Creates/exploits dependency in others        | -.18**          | -.13           | -.24*         |
| 22 – Feels lack of personal meaning in life       | -.18*           | -.07           | -.30**        |
| 36 – Negativistic; Tends to undermine/sabotage    | -.15*           | -.19+          | -.13          |
| 69 – Sensitive to anything that could be a demand | -.14*           | -.12           | -.16          |
| 55 – Self-defeating                               | -.14+           | -.14           | -.13          |
| 82 – Has fluctuating moods                        | -.13+           | -.12           | -.11          |
| 13 – Thin-skinned; Sensitive to criticism         | -.12+           | -.11           | -.12          |
| 38 – Hostile towards others                       | -.12+           | -.11           | -.14          |
| 20 – Rapid personal tempo                         | -.12+           | -.15           | -.10          |
| <u>Average Absolute r</u>                         | <u>.07*</u>     | <u>.08</u>     | <u>.09+</u>   |

Note. CAQ Item content abbreviated. \*\*  $p < .01$ , \*  $p < .05$ , +  $p < .10$ . Female-Male vector correlation  $r = .30$ .

As can be seen, for the full sample, 11 of the 100 CAQ personality items were statistically significantly correlated with behavioral consistency (at  $p < .05$ ). This number is more than double the number of significant correlates nominally expected by chance, which would be 5. But this expectation is at best imprecise, and is based on an assumption of multivariate independence that is probably incorrect. Recently, Sherman and Funder (2009) developed a randomization test for estimating the probability of obtaining a given number of significant correlates by chance. In the present context, the

probability of obtaining 11 statistically significant correlates is  $p = .035$ . According to a further randomization procedure recommended by Sherman and Funder (2009), the average absolute  $r$  between the 100 personality traits of the CAQ and behavioral consistency after controlling for both indexes of situational similarity, shown in the bottom row of Table 2-2, was also statistically significant,  $p = .0147$ .

Interestingly enough, though perhaps unsurprisingly in retrospect, people who behaved most consistently view themselves as, “favoring conservative values,” “behaving in an ethically consistent manner,” “genuinely dependable,” and “behaving in a gender consistent manner.” Further, people who behaved most consistently across the four situations on average indicated that they do *not* have “a brittle ego-defense system,” “feel a lack of personal meaning in life,” or have “fluctuating moods” (item content is abbreviated). Although Table 2-2 suggests some gender differences in the personality correlates of behavioral consistency (e.g. being interested in members of the opposite sex is a stronger correlate of behavioral consistency among men than among women), the vector correlation between the two patterns of correlations is moderately positive ( $r = .30$ ).

Further analyses examined the possibility of sub-cultural differences in the correlates of behavioral consistency over and above the effect of situational similarity. Based on self-reported ethnicity, we divided our total sample into two groups of Asians ( $N = 75$ ) and non-Asians ( $N = 127$ ). The vector correlation between the two sets of Q-correlates was a modest but positive  $r = .20$ , suggesting that the basic pattern does not vary dramatically across the two groups. Perhaps more surprisingly, many of the Q-items



related to psychological adjustment were just as highly or even slightly more highly correlated with behavioral consistency in the Asian as in the non-Asian subsamples. For example, among our self-identified Asian participants behavioral consistency was correlated with “cheerful” ( $r = .25$ ), “social poise and presence” ( $r = .24$ ), and “satisfied with self” ( $r = .30$ ). In the Asian group behavioral consistency was negatively correlated with, among other items, “brittle ego-defense system” ( $r = -.35$ ), “self-defeating” ( $r = -.33$ ), and “concerned with own adequacy as a person” ( $r = -.29$ ) (all degrees of freedom = 73 and  $p < .05$ ; item content is abbreviated). Thus, it would appear that in this sample of American college students, Asian ethnicity did not attenuate the relationship between behavioral consistency and psychological adjustment.

In addition to the CAQ correlates of behavioral consistency, we also examined the Big Five personality correlates in the same fashion (see Table 2-3).

Table 2-3.

Self-Reported Big 5 Correlates of Behavioral Consistency

| Big Five Factor   | N   | <i>r</i> | <i>LL</i> | <i>UL</i> |
|-------------------|-----|----------|-----------|-----------|
| Extraversion      | 201 | .04      | -.10      | .17       |
| Agreeableness     | 202 | .08      | -.05      | .22       |
| Conscientiousness | 202 | .02      | -.11      | .16       |
| Openness          | 200 | -.01     | -.15      | .12       |
| Neuroticism       | 202 | -.20**   | -.33      | -.06      |

Note. \*\*  $p < .01$ . LL and UL are the lower and upper limits for the 95% confidence interval respectively.

The results indicate people who reported being higher in neuroticism also reported less consistent behavior across the four situations, when controlling for situational similarity ( $r = -.20$ ,  $t(200) = -2.91$ ,  $p = .004$ ). This finding, too, was found within the sub-sample of ethnically Asian participants ( $r = -.31$ ,  $t(73) = -2.80$ ,  $p = .007$ ).

## Discussion

### *Key Substantive Findings*

A central aim of this paper was to test the usefulness of the RSQ as a tool for measuring the psychological properties of situations. To this end, we examined four hypotheses. In support of the first hypothesis, people reported considerable ipsative behavioral consistency across four situations quasi-randomly selected from their daily lives. In support of the second hypothesis, indexes of situational similarity based on the participants' descriptions of situations, as well as descriptions rendered by independent raters, both indicate that people have a tendency to find themselves in situations that are more similar to each other than they are to situations experienced by others. In support of the third hypothesis, a strong and positive relationship was found between behavioral consistency and both indexes of situational similarity. In addition, the relationship between situational similarity as derived from descriptions by independent raters and behavioral consistency was nearly fully mediated by situational similarity as derived from the participants' own descriptions. Finally, in relation to the fourth hypothesis, although the relationship between situational similarity and behavioral consistency was strong and positive, personality still had a marked relationship with behavioral consistency even when situational similarity was statistically controlled. People who report that they are "ethically consistent," "favor conservative values," and are less neurotic were more behaviorally consistent. The relationship between behavioral consistency and psychological adjustment was found just as strongly, if not more so, among the ethnic Asian participants in our sample.

The findings that people demonstrate high within person levels of situational similarity and behavioral consistency, and that these two are highly related to one another, suggest that one explanation for behavioral consistency is that people often find themselves in similar contexts (Ickes, et al., 1997). However, situational similarity alone was not able to fully account for the variability in behavioral consistency. When situational similarity was statistically controlled, personality traits offered appreciable gains. This finding implies that some people are even *more consistent* than one might expect given the similarity of the situations they experience and that these people tend to be emotionally stable, dependable, and conservative.

The finding that the relationship between situational similarity as derived from descriptions by third parties and behavioral consistency was almost fully mediated by situational similarity as derived from the participants' own descriptions has more than one possible explanation. Perhaps the result stems from methodological overlap; the open-ended descriptions on which the independent raters based their ratings also came from the participants. To assess this possibility, one would ideally like to compare these results to what one would find if the situations had been directly observed by independent raters. However, the participants' descriptions were generally straightforward descriptions of situational facts (e.g., taking a midterm, playing softball in the park) and might not have been described, at that level, much differently by others who were present. Moreover, as considered below, the research to allow such a comparison would confront daunting operational and ethical obstacles. For this initial effort, gaining insights into contexts of daily life required sacrificing the ability to observe situations directly.

A psychological, rather than methodological, explanation for the mediation effect is that while objective, or factual, features of a situation have important effects on behavior, those features are inevitably filtered through the perceptions of the person who experiences it (Reis, 2008). One can only react to what one perceives, regardless of what actually occurs. To be clear, while it is critically important to measure features of situations separately from features of persons (i.e., objectively), it seems obvious that a person's particular construal of a situation should be especially related to his or her behavior.

#### *Limitations and Future Challenges*

One of the challenges for future research on behavioral consistency and situational similarity as manifested in everyday life will be to gather data using methods that go beyond self-report. The present study gathered self-reported information about situations participants had recently experienced along with the participants' behaviors because it aimed to gather information from beyond the laboratory. Future studies might seek ratings of situations and behaviors from others who were present. Another way to move beyond self-report might be to utilize direct observational methods either by physically following participants around in their daily lives or by making sound and video recordings that are later coded for situational and behavioral information. Data gathering of this nature would be extremely time-consuming and expensive (even more so than the present study which took nearly two years to complete), as well as substantially more intrusive into the lives of participants and their acquaintances. Nonetheless, these possibilities merit further consideration (Furr, 2009).

A further challenge for the assessment of situations is to move beyond college student participants toward more representative samples drawn from the broader adult population. As noted in the results, approximately 33% of the situations gathered in this study were related to the contexts of undergraduate student life (e.g. “in class”, “doing homework”). Although the major findings, that situational similarity and personality predict behavioral consistency, seem likely to generalize, future research on situational assessment, especially that which seeks to identify essential types of situations, will have to tackle the difficult issues involved with gathering data from participants other than students, in adult contexts of work and family life. Another useful future direction would be to expand situational research into different cultures. As noted above, the association between behavioral consistency and psychological adjustment was strong among self-identified Asian participants, notwithstanding prior suggestions that this association might be weaker or nonexistent (Church, 2009; Suh, 2002). But of course, all of the “Asian” participants in this study were in fact American college students—whether similar results would be found on the Asian continent is a worthwhile subject for further investigation.

The extension of situational assessment into a wider range of settings or cross-cultural contexts may require further revision of the item content of the RSQ, or perhaps the development, from the ground up, of entirely new sets of custom-designed items. For example, it is possible to envision items specifically written to assess work-related contexts, medical environments, or the everyday situations of childrearing and family life. Particular theoretical orientations towards the nature of situations, such as

evolutionary psychology (e.g., Figueredo, Gladden, Vásquez, Wolf & Jones, 2009), might also inspire specialized item content, as might the goal to compare the contexts prevalent in different cultures. The RSQ was written to be as general as possible. However, we would encourage other investigators to put its content to the test in a wide variety of contexts, and to try their hand at writing their own items when useful. The “ultimate set” of situational descriptors may not be imminent but, as the present research demonstrates, such a set is not necessary in order to make research progress now.

### *Implications*

The present findings have a number of implications for personality and social psychology. First, this study is to our knowledge the first to include comprehensive measures of all three elements of the personality triad – persons, behaviors, and situations (Funder, 2006). Indeed, with the introduction of the RSQ, Q-sort assessment devices are now available for all three. Common practice in previous research has been to examine just a few properties of persons, behaviors, or situations, or even just one. The inclusion of more comprehensive assessments allowed this study to illuminate how psychological properties of situations relate to individuals’ behavioral consistency as well as how personality relates to behavioral consistency independently of the situations people experience.

Second, the present findings support a growing body of theoretical and empirical literature suggesting that within Western society—including, in our sample, among ethnically Asian participants—behavioral consistency appears to be a hallmark of mental health (Allport, 1955; Block, 1961; Donahue et al., 1993; Furr, 2000; Rogers, 1959;

Sheldon, Ryan, Rawsthorne, & Illardi, 1997). The only Big Five marker with a substantial relationship was neuroticism, which is characterized by anxiety, fearfulness, and emotional instability, and this trait was negatively associated with behavioral consistency. The study also partially replicated Furr (2000), who utilized an ipsative approach to behavioral consistency within an experimental context and found a link between behavioral consistency and positive psychological functioning.

Finally, this study is the first to demonstrate a few of the many potential uses of a standardized taxonomy of situational characteristics, in this case the newly-developed RSQ. As noted in the introduction, researchers in personality and social psychology have lamented for nearly 40 years that no such taxonomy yet exists that can be applied to psychological research. As demonstrated here, the RSQ provides one. Moreover, without this taxonomy, the present study would have been impossible. In the experimental context used by Furr and Funder (2004), situational similarity was relatively easy to manipulate and capture because all participants encountered the same small set of experimentally controlled situations. However, to capture the degree of similarity between two or more situations in real world contexts, it is necessary to measure and compare a wide range of psychological properties. Beyond the purposes for which the RSQ was employed in the present study, it has a large number of other potential uses including template-matching approaches (Bem & Funder, 1978), assessing the nature of experimental manipulations in a single study, comparing experimental manipulations across studies, categorizing types of situations in different cultures, examining individual

differences in situation perception or construal, and evaluating person-situation fit in applied settings.

### *Conclusion*

The present study has demonstrated that behavioral consistency in daily life, ipsatively measured, is strongly and positively related to situational similarity. Taken together with the experimental laboratory findings of Furr and Funder (2004) and other past research, these results make it plausible to conclude that there is a causal relationship such that increased situational similarity yields greater behavioral consistency. However, individual differences in behavioral consistency beyond those explained by situational similarity can also be predicted by personality. Thus, the degree to which an individual will perform the same behaviors at two different times, a few days apart, is largely a function of two things: the similarity between the two situations and the personality of the individual. Finally, this study demonstrates the potential for psychological understanding gained by having an instrument to measure the properties of situations.



### Chapter 3 - Properties of Persons and Situations related to Personality-Behavior Congruence<sup>17</sup>

When behaving congruently, characteristically friendly people act more friendly than hostile, characteristically talkative people talk more than they are silent, and characteristically withdrawn people pull back from more than engage in social interaction. Thus, we define *congruence* as the degree to which the pattern of an individual's personality attributes matches the pattern of his or her behavior. But a person's personality is not always congruent with his or her behavior. People may occasionally act in ways that are unrelated to or even at variance with their characteristic personality attributes (Fleeson & Wilt, 2010). The purpose of the present article is to address the psychological factors associated with variation in personality-behavior congruence.

Two kinds of factors will be considered. First, some people may be more congruent than others. Past research suggests that individual differences in behavioral consistency and "judgability" may be associated with the degree to which people consistently express their personalities across the situations they encounter (e.g., Colvin, 1993; Sherman, Nave, & Funder, 2010a). Second, some situations may promote congruence more than others (Fleeson, 2007). Situations with relatively strong forces may constrain individual differences in behavior and thereby inhibit the emergence of personality-behavior congruence (Mischel, 1977; Snyder & Ickes, 1985) as opposed to

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<sup>17</sup> At present this chapter is a manuscript under revision (see Sherman, Nave & Funder, *under revision*).

weaker situations which provide little structure guiding behavior. A different theoretical perspective suggests that situations that promote autonomy or meet one's relatedness to other's needs may allow greater expression of individual differences so that congruence emerges more easily (Deci & Ryan, 1987; 2000; Ryan & Deci, 2000).

Assessment of this second possibility requires a technique for assessing and comparing the psychological properties of situations (see Reis, 2008). Such a technique has recently become available. The present study will employ the newly-developed Riverside Situational Q-sort (RSQ; Sherman et al., 2010a; Wagerman & Funder, 2010), which in the version used in this study (V2.0) gathers 81 ratings of psychological properties that, taken together, provide a rich characterization of a situation. The RSQ allows different situations to be compared to one another and also provides a way to operationalize theoretical conceptions of situations via templates of "ideal" prototypes. In a recently published study, participants used this instrument to describe four situations they experienced in their daily lives over a period of several weeks. In addition, they offered comprehensive reports of their behavior in each situation (Sherman et al., 2010a). The results indicated that people behaved more consistently across situations that were more similar to each other and that well-adjusted individuals were more consistent than less well-adjusted individuals over and above the effect of situational similarity. In the research to be reported here, the degree to which a participant's personality is congruent with his or her behavior across four situations will be assessed and the RSQ will be used to determine the degree to which properties of the situations experienced by participants are associated with congruence in ways predicted from psychological theory.

### *Congruence: A Person-centered Approach*

The vast majority of research documenting the associations between personality and behavior has followed a variable-centered approach (Furr, 2008; Furr & Funder, 2004). Variable-centered personality research focuses on establishing relationships between individual differences in specific traits and individual differences in behavioral outcomes. For example, people with higher levels of conscientiousness exhibit superior work performance (Barrick & Mount, 1991; Barrick, Mount, & Judge, 2001) and smoke less (Hampson et al., 2000). People higher in extraversion perform more pro-social behaviors and acts of volunteerism (Penner, 2002).

The examination of personality-behavior congruence requires a different perspective, a perspective that captures how a single individual's congruence might change based on the situation that he or she is in. Such a perspective is the person-centered approach (Furr, 2008; Lamiell, 1981). In this approach, the person rather than the trait is the unit of analysis, and analyses focus on the degree to which the pattern of traits that characterizes a particular individual is similar to – congruent with – his or her pattern of behaviors. For example, if an individual's personality is characteristically more talkative than hostile, then one might expect, in a given situation, to observe his or her behavior to be better described by the term "talkative" than by the term "hostile." The overall assessment of congruence requires that many personality variables be assessed for each individual, along with many aspects of behavior at each measurement occasion. Traditionally, this is rare in psychological research. Typical studies measure just one or a few (perhaps five) aspects of personality, and the modal number of behaviors assessed is

one (Funder, 2001). The present study uses the California Adult Q-sort (CAQ: Block, 1961/1978) to assess a wide variety of personality variables and the Riverside Behavioral Q-sort (RBQ: Funder, Furr, & Colvin, 2000) to assess a wide variety of behaviors. It compares data gathered by these two instruments to assess the degree to which personality is congruent with behavior and the degree to which such congruence is associated with psychological properties of the person as well as psychological properties of the situation in which the behavior is performed.

*Properties of Persons: Psychological Adjustment*

One property of persons that might be related to personality-behavior congruence is, broadly speaking, psychological adjustment. A number of theoretical arguments and empirical findings point to this possibility. Carl Rogers (1959, 1961) emphasized that individuals move toward “becoming a person” only to the degree that they succeed in increasing the authentic connection between who they are and how they act, and move away from constructing facades aimed at gaining social approval. In a similar vein, Jourard (1963) suggested that individuals with strong and healthy personalities are guided by consistent, internal core beliefs rather than driven by fluctuating, external situational demands.

Subsequent empirical research suggests that these theorists may not have been far off the mark. Block (1961) asked participants to describe their interpersonal behavior across eight relationships, and then constructed an index of cross-relationship variability. Participants who manifested higher behavioral variability (which in Rogers’ and Jourard’s terms could be considered a sign of low authenticity) exhibited higher levels of

maladjustment compared to those low on behavioral variability (high authenticity). More than 30 years later, a parallel study essentially replicated Block's findings (Donahue, Robins, Roberts, & John, 1993), and further confirmation came from studies in various samples using a variety of measures of variability or inauthenticity (e.g., Diehl, Hastings, & Stanton, 2001; McReynolds, Altrocchi, & House, 2000; Sheldon et al., 1997; Suh, 2002). More support for the relationship between psychological health and consistency came from a study that demonstrated that the degree to which a person is judgable—as indexed by self-peer agreement about personality, peer-peer agreement about personality, and the ability of peer reports of personality to predict behavior in an experimental context—is positively related to adjustment (Colvin, 1993). Another study showed that when people vary away from their general or characteristic style within a given role, they tend to feel less content within that role (Roberts & Donahue, 1994; but see Fleeson & Wilt, 2010, for a contrary finding). Finally, as mentioned earlier, a recent study using the Riverside Situational Q-sort found that while, as might be expected, people tend to be more consistent in their behavior across more similar situations, psychologically better-adjusted people tend to be more cross-situationally consistent than those with poorer adjustment, over and above the effect of situational similarity (Sherman et al., 2010a).

Nearly all of the studies just summarized, including the previous study from the present research program by Sherman et al. (2010a), address behavioral consistency, the degree to which people maintain similar patterns of behavior across situations. But consistency is not quite the same thing as congruence. Congruence requires more than cross-situational consistency; it requires that the pattern of an individual's behavior in

each of the situations he or she encounters matches the pattern of his or her personality. If such congruence were found to be associated with psychological adjustment, then this finding might imply that individuals who achieve authenticity by behaving more in accordance with their latent general traits and less by catering to the demands of a particular situation or social role may be manifesting an important sign of psychological health.

It should be noted that while past research paints a rather rosy picture of consistency suggesting that persons who are well-adjusted tend to behave more consistently, the psychological concepts of “rigidity” or “stubbornness” would seem to be at odds with such findings. Concepts such as these make one wonder; can too much consistency be a bad thing? In terms of congruence, one might similarly ask if behaving too much in accordance with one’s personality is a bad thing? Or in other words, might there be a curvilinear relationship between psychological adjustment and congruence such that persons with the highest levels of congruence are actually less psychologically well-adjusted? These are of course empirical questions and we offer that while it is easy to think of examples of how being too consistent or rigid leads to negative outcomes, the literature on behavioral consistency to date does not provide any evidence in favor of this hypothesis. However, the question of whether behaving too congruently is related to poor psychological adjustment has not yet been answered. The present research directly addresses this question.

### *Situations Defined*

Social psychological research has a long history and deep tradition of demonstrating the ways in which particular aspects of situations can powerfully influence behavior (Ross & Nisbett, 1991) and thousands of published studies have demonstrated that sometimes seemingly minor manipulations can have major effects (Richard, Bond, & Stokes-Zoota, 2003). Indeed, for a period of time in the 1970s through the 1980s the fields of personality and social psychology were marked by a “situationist” movement (Bowers, 1973; Kenrick & Funder, 1988). However, most work in experimental social psychology has focused on manipulating a single situational variable of interest and examining its effect on—most often—a single behavior. Such efforts while typically useful for advancing the particular social psychological theory under scrutiny have not led to a broader compilation of the important, or behaviorally relevant, psychological features of situations (Funder, 2009b). Or as Frederiksen (1972) put it, “the guiding principle in devising these experiments has naturally enough, usually been the hypothesis or theory being tested. Such work has not led to the construction of a taxonomy of situations” (p. 115). This is not to say that researchers have never attempted to develop such taxonomies. A number of earlier efforts are reviewed in great detail by Ten Berge and De Raad (1999). Here we describe a number of important features of some of these earlier efforts as well as other taxonomies developed since their review.<sup>18</sup>

A number of previous attempts to develop taxonomies of situations have fallen short in one important regard; they left researchers without a usable tool for quantifying

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<sup>18</sup> Although we have previously discussed these efforts (see Sherman et al. 2010a), we discuss them again here for completeness.

the psychological properties of a broad range of situations or, as Reis (2008) noted, systematically comparing one situation to another. For example, some studies have exclusively focused on particular types such as “anxiety-provoking situations” (Endler, Hunt, & Rosenstein, 1962; Krahe 1986) or “academic study situations” (Magnusson, 1971). A taxonomy developed by such research is unlikely to widely generalize—a measure developed to assess the properties of “anxiety-provoking” situations, for example, may not be especially useful among situations that do not fall into this category.

In a more comprehensive effort, Van Heck (1984) used a lexical approach to identify words that could meaningfully fall into the sentence, “being confronted with a \_\_\_\_\_ situation.” A further series of ratings and factor analyses yielded 10 categories: interpersonal conflict, joint working, intimacy and interpersonal relations, recreation, traveling, rituals, sport, excesses, serving, and trading. In a similar vein, Edwards & Templeton (2005) used a dictionary and a separate database to find 1039 words that could complete “that situation was \_\_\_\_\_” or “that was a \_\_\_\_\_ situation.” These words were reduced through ratings and factor analysis to four factors called positivity, negativity, productivity, and “ease of negotiation.” A particularly interesting study by Yang, Read and Miller (2006) applied the lexical approach to Chinese idioms that describe situational contexts (e.g. “too late for regrets” and “catching up from behind”) and reduced them through ratings and factor analysis to 20 hierarchically structured clusters all having to do with means of attaining goals. Although suggestions have been offered that efforts like these have the potential to yield methods for measuring properties of situations (Forgas &



Van Heck, 1992), to our knowledge no such assessment device has actually been employed in published empirical research.

A different approach to classifying situations (Kelley, Holmes, Kerr, Reis, Rusbult, van Lange, 2003) used six dimensions derived from interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) singly and in combination to “define 20 of the most common situations encountered in ordinary social life” (Reis, 2008, p. 317). Using this approach, researchers can examine a given situation in relation to each of the six dichotomous dimensions and determine which are relevant, and then classify it into one of the 20 types. This work derives from a theoretical perspective that assumes all situations, or at least the most psychologically important ones (Reis, 2009), are essentially interpersonal. The taxonomy of interpersonal situations included in the resulting “atlas” (Kelley et al., 2003) is wide-ranging and impressive, but like most other efforts in this domain falls short, at present, of offering a usable assessment device. Moreover, while many behaviors in many contexts relate to interpersonal goals, some do not. An approach that is entirely interpersonal leaves no place for situations associated with solitary behaviors such as working hard on a term paper, meditating, driving to work, or exercising.

Thus, although many efforts have been made to develop comprehensive taxonomies of situations, no single taxonomy has been widely accepted nor have the proper measurement instruments been developed for assessing situations with perhaps one lone exception (that being the Riverside Situational Q-Sort (RSQ): Wagerman & Funder, 2009). This is not the first time this issue has been brought to bear. Recently,

Reis (2008) noted, “the field has yet to develop a clear, consensual definition or taxonomy of what situations are, how they might systematically be compared, and which ones are most influential in what ways” (p. 312).

As Reis makes clear, it is impossible to go forward with research examining how situations affect behavior and emotions without addressing these issues. Indeed, the word situation is rather ill-defined. For example, some recent work has defined situations as interpersonal encounters (Fournier, Moskowitz, & Zuroff, 2008; 2009; Kelley et al., 2003). Perhaps one reasonable place to look for the definition in the dictionary which offers the following definition of a situation: “the total set of physical, social, and psychocultural factors that act upon an individual in orienting and conditioning his or her behavior” (Merriam-Webster’s Medical Dictionary, 2007). And this is perhaps as good a definition of a situation as any, but still no clear consensual definition of what psychology means by “situation” exists. This is an important distinction from the medical definition of a situation because when discussing the nature of situations, psychologists are typically only concerned with the psychological elements, or properties, of that situation, and not the physical environment in which one is engrossed. This is akin to the fact that when psychologists refer to persons they are often making reference to the psychological characteristics, as opposed to the physical characteristics, of the person. Further, on the occasions when psychologists refer to physical characteristics of persons (e.g. one’s attractiveness) the typical interest among psychologists is about the psychological consequences, for the self and others, of physical attractiveness.

When trying to understand what situations are from a psychological perspective, it may first be helpful to understand what psychologists mean when they use the term person. Typically, persons—from a psychological perspective—can be considered the sum total of all of their psychological characteristics. This includes their goals, motives, traits, schemas, attitudes, perceptions, among many other often used psychological constructs (cf. McAdams, 1995). Thus, if persons are defined by all of the psychological elements that exist inside the person, it is logical to define situations as all of the psychological elements that exist outside the person. But the definition of a situation requires more precision because while the evidence suggests that persons tend to remain relatively stable in their psychological makeup over time (Caspi & Roberts, 2001; Caspi, Roberts, & Shiner, 2005; Hampson & Goldberg, 2006; Mischel, Shoda, & Peake, 1988), common experience suggests that situations can change quite rapidly. Therefore, a situation is *the immediate psychological context in which a person is surrounded or immersed at a particular time*. According to this definition then, situations exist in a particular moment in both time and space. This definition certainly raises questions about what is meant by situations existing in a particular time. For instance, how long must time pass for something to be considered a situation? Or how does one know when a situation has changed? In terms of the first question, this definition of a situation places no minimum or maximum temporal limits for a situation's existence. From this point of view, a situation can last but a mere moment, minutes, hours, or—in perhaps rare cases—years. In regards to the question of how one knows when a situation has changed, the

moment at which the psychological properties making up the said situation change, is when a different situation now exists.

The definition that situations exist in both time and space also raises questions about what is meant by space. By ‘space’, this definition of a situation dictates that situations are real in their existence and have real psychological properties in the same sense that persons have a real existence and have real psychological properties (i.e. traits, characteristics, physical and psychological limits). That is, situations are not merely social constructions but rather something psychologically real. While the idea that situations exist in reality, and not merely in the mind, seems to be at the heart of nearly every social psychological experiment, some previous statements made by researchers imply that situations only exist in the mind. For example, Mischel (1977, p. 253) observed that, “any given, objective stimulus condition may have a variety of effects, depending on how the individual construes and transforms it” and Bem and Allen (1974, p. 518) stated that “the classification of situations...will have to be in terms of the individual’s phenomenology, not the investigator’s.” While the observations of these authors seem reasonable at face value, they can be taken too far.

Specifically, if we take the point of view that situations are merely social constructions of the person perceiving them to its extreme, we see that the logic of such a perspective breaks down. First, if we assume that situations do not actually exist in reality but only as social constructions of the mind we actually lose the existence of situations entirely (Wagerman, 2008)! This would imply—for better or worse—that the years spent debating which was more important persons or situations were entirely wasted because a

social constructivist point of view dictates that situations themselves do not exist and that only personal phenomenology exists. If this were indeed true, the answer to the person-situation debate is definitively persons. Moreover, this perspective implies that the rich history of experimental social psychology demonstrating that minor manipulations of situations can cause major changes in behavior (Ross & Nisbett, 1991) is also wrong. Indeed, a social constructivist point of view on situations implies that it is only because people perceive two (or more) contexts differently that their behavior differs, not by any means that actual differences in those contexts exist. While it seems obvious that one's perception of the immediate context has a more direct influence on how one responds (Reis, 2008), it seems incorrect on an intuitive level to assume that actual properties of situations are not the direct causes of such perceptions.

In many ways, the debate over the actual existence of situations, versus their constructed existence, is akin to philosophical arguments made years ago in the person perception (or personality judgment) literature. These social constructivist arguments declared that the accuracy of any social judgment was not measurable because all perceptions of reality can be accurate through one's own phenomenology. Ultimately however, this philosophical perspective gave way to the critical realist philosophy, dictating that not all different perceptions of reality can be equally valid (Rorer, 1990). Because this assumption that not all perceptions are equally valid seemed more congruent with common experience and because it did not completely halt the scientific study of person perception accuracy in its tracks, the critical realistic philosophy seemed to be more reasonable than a social constructivist philosophy for the study of person

perception, and likewise today it proves to be a more reasonable philosophy for the study of situations. Thus, situations do indeed exist in both time and space.

### *The Assessment of Situations*

Having defined what we mean by the word situation, we now turn to the second issue of how they ought to be measured. As noted by Frederickson (1972) and Reis (2008), despite years of work in personality and social psychology, no particularly useful measure of the psychologically relevant features of situations has emerged. However, a new measure for assessing the psychologically important properties of situations, namely the Riverside Situational Q-Sort (RSQ: Wagerman & Funder, 2009, see also Sherman et al., 2010a) has been recently developed. The RSQ Version 2.0 includes 81 items describing psychological characteristics of situations (e.g. “Context is potentially anxiety-inducing,” “A job needs to be done,” “Person is pressured to conform”).<sup>19</sup> Raters, who could be participants in a situation or third-party observers, provide a comprehensive situational assessment by placing the items into a forced-choice, 9-step, quasi-normal distribution. This Q-sort format differs from conventional Likert-style response scales, in that it forces raters to choose only a small subset of the items as highly characteristic or uncharacteristic of the target of assessment, with many more being placed in the middle as comparatively irrelevant (Block, 1978; Funder & Colvin, 1991). While relatively labor-intensive, the method has several advantages. It prevents the manifestation of some rater response sets (e.g., acquiescence, extremity), and forces a rater to carefully consider each item, since each one is, in effect, compared with every other. A completed Q-sort

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<sup>19</sup> Go to <http://rap.ucr.edu/qsorter> for full item content for RSQv2 and for the most recently developed version of this still-evolving instrument.

using the RSQ offers a wide-ranging and psychologically rich situational description along 81 dimensions.<sup>20</sup> The present research employs the RSQ because, to our knowledge, it is the only situation assessment method that offers comprehensive assessment of situations allowing one situation to be compared with another. As will be demonstrated in the present article, it also allows situations to be compared to theoretically-derived templates for the purpose of testing psychological theory.

#### *Properties of Situations and Congruence*

The effect of interest in the present study concerns the influence of situations on personality-behavior congruence. What aspects of situations make such congruence most and least likely? Prior theorizing suggests two possible answers. One answer is offered by the possibility that some situations are “stronger” than others, as postulated by the Strong Situation Hypothesis (Cooper & Withey, 2009). An early statement of the hypothesis was offered by Mischel:

Psychological “situations” (stimuli, treatments) are powerful to the degree that they lead everyone to construe the particular events the same way, induce *uniform* expectancies regarding the most appropriate response pattern, provide adequate incentives for the performance of that response pattern and require skills that everyone has to the same extent...Conversely, situations are weak to the degree that they are not uniformly encoded, do not generate uniform expectancies concerning the desired behavior, do not offer sufficient incentives for its performance, or

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<sup>20</sup> See Wagerman and Funder (2009) and Sherman et al. (2010a) for a more complete description of the RSQ’s creation and development.

fail to provide the learning conditions required for successful genesis of the behavior (1977, p. 347, emphasis in original).

Later, Snyder and Ickes (1985) summarized:

In general, psychologically “strong” situations tend to be those that provide salient cues to guide behavior and have a fairly high degree of structure and definition. In contrast, psychologically “weak” situations tend to be those that do not offer salient cues to guide behavior and are relatively unstructured and ambiguous (p. 904).

Thus the Strong Situation Hypothesis implies that persons should have more room to display congruence between personality and behavior in situations that are psychologically weak and less opportunity in situations that are psychologically strong. One recent meta-analytic review from the applied literature of organizational psychology showed that situational strength moderates the relationship between trait conscientiousness and job performance such that in psychologically strong situations, the relationship between conscientiousness and job performance is reduced (Meyer, Dalal, & Bonaccio, 2009). Still, while the prediction implied by the Strong Situation Hypothesis seems reasonable and a few studies such as the one just cited provide some recent, limited empirical support (see also Meyer, Dalal, & Hermida, 2010), the general prediction has seldom been directly tested, and one recent review even concluded that empirical evidence for the Strong Situation Hypothesis is utterly lacking (Cooper & Withey, 2009).



A second and more specific possible answer to the question of what kinds of situations promote personality-behavior congruence can be derived from Self-determination Theory (SDT: Deci & Ryan, 1987; 2000; Ryan & Deci, 2000). SDT is typically framed as a theory of personality and motivation that describes individual differences in people's orientations to the environment and tendencies to engage the world in a self-directed, subjectively fulfilling manner. It claims that situations and social roles vary in the degree to which they are conducive to authentic behavior, which in turn explains why people vary in the degree to which they feel authentic across situations and social roles (Ryan, 1995). SDT identifies three basic psychological needs—relatedness to others, competence, and autonomy—as the central components for healthy psychological development and a satisfying life. Moreover, SDT predicts that when a person encounters a situation that meets these psychological needs, the person's behavior will be reflective of his or her true self. Specifically, one might expect that personality-behavior congruence might be greater in situations that promote autonomy, relatedness to others, and competence.

### *Hypotheses*

*Hypothesis 1: In general, people will demonstrate a significant degree of personality-behavior congruence.* This hypothesis predicts that the pattern of our participants' personalities will be associated with the patterning of their behavior in each of several situations in daily life. The slow but steady (or steady but slow) resolution of the classic "person-situation debate" (Fleeson & Nofhle, 2009; Funder, 2009a; Kenrick & Funder, 1988) makes this hypothesis less controversial than it would have been years

ago. However, establishing the general phenomenon of personality-behavior congruence using the present measurement tools and person-centered approach is a necessary first step towards examination of the other hypotheses.

*Hypothesis 2: Individuals who exhibit greater personality-behavior congruence will manifest greater psychological adjustment.* This hypothesis stems from classic theorizing by Rogers and Jourard, along with a host of empirical findings indicating that behavioral consistency is associated with adjustment. The person-centered design of the present study allows a direct test of the congruence hypothesis by comparing patterns of personality within individuals with their patterns of behavior in each of four situations experienced in their daily lives. In addition, the person-centered design allows the examination of a possible alternative hypothesis of a curvilinear relationship between adjustment and congruence such that both too little congruence and too much congruence are associated with lower levels of psychological adjustment.

*Hypothesis 3: Personality-behavior congruence will be lower in strong situations than in weak ones, as predicted by the Strong Situation Hypothesis.* The Riverside Situational Q-sort provides a unique way to test this hypothesis. The RSQ will be used to construct a prototypical template of the “ideal” strong situation, to which each situation experienced by our participants can be compared. The hypothesis predicts that as situations more closely match this template, less personality-behavior congruence will be manifest in them.

*Hypothesis 4: Personality-behavior congruence will be higher in situations that afford one's autonomy, relatedness to others, and competence needs to be met, as set forth by Self-determination Theory.* This hypothesis will also be tested using the RSQ. A template of the prototypical, ideal autonomy-need-meeting situation, relatedness to others-need-meeting situation, and competence-need-meeting situation will be matched to each of the situations experienced by our participants. The hypothesis will be confirmed to the degree that greater personality-behavior congruence is found in situations that more closely match the template.

## Method

### *Study Design & Overview*

The present study employed a short-term longitudinal design in which participants completed measurements on 5 different sessions over 5 weeks. At the first session participants completed the battery of personality and adjustment measures described in the Measures section. At the subsequent 4 sessions, participants described the psychological properties of a situation they had experienced at an experimenter-specified time within the previous 24 hours as well as their behavior in that situation. Data from this study come from a larger project that has yielded one previous publication (Sherman et al., 2010a), but the analyses presented here are unique.

### *Participants*

Two-hundred twenty-one undergraduate participants from the University of California, Riverside were solicited via fliers on campus and an online psychology department participant recruiting system. Data collection began in the fall of 2007 and

concluded in the spring of 2009. Because the estimation of personality-behavior congruence requires participants with complete measures of both personality and behavior, only participants who completed at least two sessions—personality measures at session 1 and one other session—could be included. Twelve of the 221 participants did not complete a second session and are thus not included. Additionally, 3 participants completed the study twice; data from their second participation was dropped. Finally, 1 participant's data was dropped due to suspicion of random reporting. This left a sample of 205 participants eligible for analyses. Among these, 2 participants completed only two sessions and a computer error caused another participant's behavioral data for a situational session to be lost leaving a final sample of N=205, N=203, N=202, and N=203 for each of the four sessions respectively. Missing responses to some of the survey data lead the N for some specific analyses to be slightly lower. Because of the multi-ethnic nature of the UC Riverside student body, the participants are unusually diverse. The composition of the final sample of 205 participants was 38% Asian, 27% Hispanic/Latino/a, 13% Other, 13% Caucasian, 8% African American, and 1% No response. Participants were compensated \$12.50 per hour for a maximum total of \$75 if they completed all sessions.

### *Procedure*

As mentioned above, participants came to the lab for a total of 5 sessions over the course of 5 weeks. The sessions were at least 48 hours apart, but the interval was in most cases longer. At the first session participants received information about the study, provided informed consent, and completed a demographic questionnaire along with

several measures of personality and adjustment (see Measures section). At each of the subsequent four sessions participants were asked to describe a situation they had experienced the day before at one of four pre-specified times (10am, 2pm, 5pm, or 9pm) by writing on a 3 x 5 inch (7.6 x 12.7 mm) index card. Because each participant completed four sessions and four times were used, the time x session effects were completely confounded within participants. To counteract this, a modified Latin-square design was used such that approximately 1/4<sup>th</sup> of the participants completed the study using each of the following time sequences across the four measurement occasions: 10am-2pm-5pm-9pm; 2pm-5pm-9pm-10am; 5pm-9pm-10am-2pm; 9pm-10am-2pm-5pm.

Participants were instructed to specify only one situation. For example, if the participant indicated that at 2 pm she was playing softball and then going to dinner with friends, we asked her to revise to specify only one of these. In addition, participants were instructed that if they were sleeping at the indicated time they should write down what they were doing right before they went to sleep or right after they woke up. Participants were next asked to describe the psychological characteristics of that situation with the Riverside Situational Q-Sort Version 2.0 (RSQ; Sherman et al., 2010a; Wagerman & Funder, 2009) using a computer based Q-sorter program developed in our lab.<sup>21</sup>

Participants were then asked to describe how they behaved in that situation using the

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<sup>21</sup> Go to <http://rap.ucr.edu/qsorter/> for more information about this program and a free, downloadable copy. This website also includes complete lists of the CAQ, RSQ, and RBQ items used in the present study.

Riverside Behavioral Q-Sort Version 3.0 (RBQ: Funder, et al., 2000; Furr, Wagerman & Funder, 2010), also using the computer based Q-sorter program.

### *Measures*

#### *Personality*

California Adult Q-Sort. The California Adult Q-Sort (CAQ: Block, 1978; as modified for use by non-professionals by Bem & Funder, 1978) comprises 100 diverse personality characteristics (e.g., “Is genuinely dependable and responsible”; “Has a wide range of interests”). The CAQ was developed over the course of many years by Jack Block and his colleagues and has been employed in a great number of personality studies as it provides a rich and relatively comprehensive description of what a person is like. Using the Q-sorting computer program, each participant assessed his or her own personality using the modified CAQ by placing each of the items into one of nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) forming a forced choice, quasi-normal distribution. The CAQ is an ideal measure and method for estimating the congruence between one’s personality and one’s behavior in a person-centered approach because it measures a wide variety of personality characteristics and because it avoids biases which may be introduced by typical Likert type rating measures (e.g. Acquiescence, Response Set).

#### *Adjustment Measures*

Subjective Happiness Scale. The Subjective Happiness Scale (SHS: Lyubomirsky & Lepper, 1999) is a 4-item global assessment of happiness. Participants rated each item on a 7 point Likert-type scale (e.g. Item 1 – “In general I consider myself: 1 = *Not a very*

*happy person* to 7 = *A very happy person*) using a computerized testing procedure. A subjective happiness score was computed by averaging these four items, with the fourth item being reverse scored. The mean score for this sample was 5.29 ( $SD = 1.10$ ) and the coefficient *alpha* was .80.

Beck Depression Inventory. The Beck Depression Inventory II (BDI-II: Beck, Steer, & Brown, 1996) is a 21-item self-report scale that updates a widely-used instrument for measuring the severity of depression (BDI: Beck et al., 1961). Participants rated each item using a 4-point scale ranging from 0 to 3 (e.g. Sadness: “I do not feel sad” (0), “I feel sad much of the time” (1), “I am sad all the time” (2), or “I am so sad or unhappy that I can’t stand it” (3)) using a computerized testing procedure. BDI scores were calculated by summing the ratings on all 21 items. The average BDI score in this sample was 9.15 ( $SD = 7.10$ ), scores ranged from 0 to 36, and the full scale coefficient *alpha* was .84.

Psychological Well-Being. The Psychological Well-Being questionnaire (PWB: Ryff, 1989a; 1989b) includes 84-items that assess well-being along six positively correlated dimensions—Autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance—as well as one overall factor of PWB. Participants rated each item on a six point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*) using a computerized testing procedure. Mean scores on the six dimensions were combined and averaged into an overall PWB measure ( $alpha = .89$ ) for each participant with higher scores reflecting higher PWB ( $M = 4.46$ ,  $SD = .62$ ).

Ego-Resiliency. The Ego-Resiliency Scale (ER: Block & Kremen, 1996; see also Letzring, Block, & Funder, 2005) consists of 14 items that assess the degree to which a person can adjust one's level of ego-control—or impulse control—according to contextual demands and has been theoretically linked to psychological adjustment (Block & Kremen, 1996) such that persons high on ego-resiliency adapt more effectively to the affordances and constraints of their social world. Participants rated each item on a 1 (*disagree very strong*) to 4 (*agree very strongly*) scale using a computerized testing procedure. A composite ego-resilience score was computed for each participant ( $\alpha = .68$ ) and the average composite ego-resilience score was 3.12 ( $SD = .32$ ) for this sample.

Neuroticism. The Neuroticism scale of the Big Five Inventory (BFI: John & Srivastava, 1999) consists of 8 items that assess the global personality trait of Neuroticism, which is characterized by emotional instability and negative emotionality. Participants rated each item on a five point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*) using a computerized testing procedure. After reversing scoring where appropriate, a composite neuroticism score was computed for each participant ( $\alpha = .80$ ) and the average composite neuroticism score was 2.76 ( $SD = .67$ ) for this sample.

Composite Adjustment Score. Previous research has demonstrated that for at least two of these five aforementioned measures of adjustment, the empirical correlates are quite similar (Nave, Sherman, & Funder, 2008). More directly though, preliminary analyses indicated that these five measures were highly inter-correlated with each other and that their relationships to personality-behavior congruence were highly similar. Therefore, these 5 measures were combined into a single composite measure of overall



psychological adjustment. To form a composite adjustment score for each participant the average of each of the five previously described adjustment measures was computed for each participant after standardizing each measure.<sup>22</sup> This composite adjustment measure had a mean of .00 ( $SD = .75$ ) and demonstrated good internal consistency (average correlation amongst the 5 scales  $r = .46$ ,  $alpha = .81$ ).

#### *Situational Properties*

Riverside Situational Q-Sort. The Riverside Situational Q-Sort Version 2.0 (RSQ: Sherman et al., 2010a; Wagerman & Funder, 2009), comprises 81 diverse characteristics of situations (e.g., “Talking is permitted, invited, or conventionally expected”; “Context is potentially anxiety-inducing”). During four separate lab sessions, each participant assessed the situation he or she reported being in at a specified time the day before by placing each item into one of nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) according to a forced choice, quasi-normal distribution, using the Q-sorting computer program. The number of items placed in each category was 3, 6, 10, 14, 15, 14, 10, 6, and 3 for categories 1-9 respectively. Thus, as is typical of the Q-Sort method, participants are forced to decide which few items are the most and least characteristic of the situation while the majority of less relevant, or even irrelevant, items are left to the middle categories.

#### *Behaviors*

Riverside Behavioral Q-Sort. The Riverside Behavioral Q-Sort Version 3.0 (RBQ: Funder, et al., 2000; Furr, et al., 2010), is a 67-item assessment tool designed to

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<sup>22</sup> A composite was only formed for participants who had completed at least 4 out of the 5 adjustment measures.

describe a variety of characteristics of a person's observable behavior. Items include "appears relaxed and comfortable," "is expressive in face, voice and gestures," and "tries to control the situation." During each return session in the lab, and after completing the RSQ, each participant assessed his or her own behavior in the situation he or she reported being in at a specified time the previous day. This was done, using the Q-sorting computer program, by placing each of the 67 items into one of nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) forming a forced choice, quasi-normal distribution. While data derived from direct observations of behavior is generally preferable (Furr, 2009), the impracticality of gathering multiple observer reports of 67 behaviors from multiple time points in a participant's daily life necessitated the use of self-reports in this study. In addition, because the RSQ and RBQ sorts are rich descriptions of situations and behavior, participants took approximately 1 hour to complete these measures on each visit. Thus we accepted the tradeoff to gather self-reports instead of third party observer reports to ensure that the situations and behaviors reported were rich descriptions of participants' daily lives and to reduce the potential of compromising the validity of the measures caused by the distractions of taking a lengthy survey at home. It should be noted that each of these specific self-reports of situational properties and behavior were provided less than 24 hours after their occurrence, and that four such reports were obtained from each participant, one for each of four situations experienced and reported separately over a period of several weeks. In addition, recent research has provided some evidence for the relative equivalence of daily diary (i.e. end

of day) methods with electronic PDA methods for gathering such types of data (Green, Rafaeli, Bolger, Shrout, & Reis, 2006).

## Results

### *Situations: Overview*

A previous publication using this data set provided a detailed description of the kinds of situations participants in this study reported experiencing (see Sherman et al., 2010a, Table 1 or Table 2-1). Briefly, these situations included a wide range of typical settings of normal undergraduate student life, such as “playing games at a friend’s apartment,” “taking a midterm” and “making dinner for me and my boyfriend.” An exploratory inverse factor analysis using an oblique rotation identified 7 clusters (or types): I–Social Situations (roughly making up 36% of all situations), II–School Work in Class with Others (19%), III–School Work at Home or Alone (14%), IV–Recreating (13%), V–Getting Ready for Something (11%), VI–Work (4%), and VII–Unpleasant Situations (3%). While these results illustrate the diversity of situations participants in our sample experienced, it would be highly premature to regard them as a comprehensive or general model for the structure of situations (Sherman et al., 2010a) and for that reason they are not considered further in this article.

### *Quantifying Personality-Behavior Congruence*

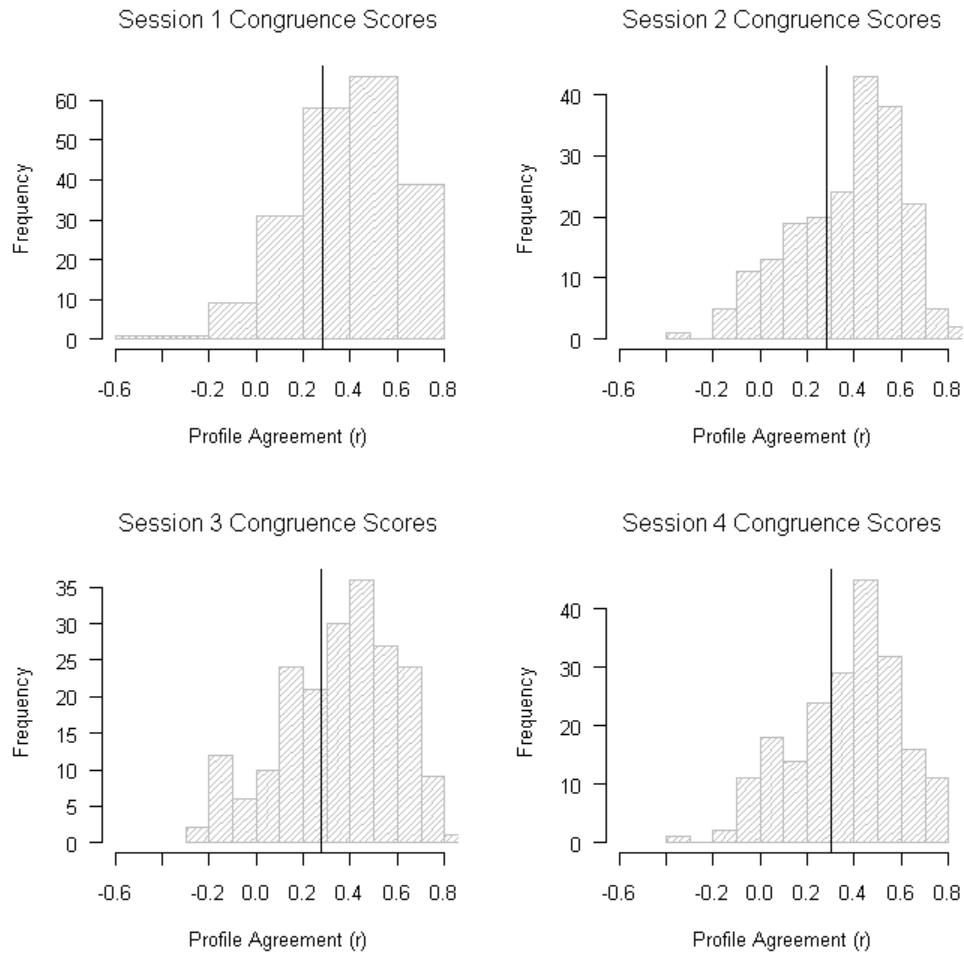
Before hypothesis-testing could begin, it was first necessary to quantify the degree to which each participant displayed personality-behavior congruence in each situation. This requires that participants be measured on a relatively large number of both personality characteristics and behaviors directly related to those personality

characteristics. Because the RBQ was originally devised to measure behaviors relevant to personality items on the CAQ (see Funder et al., 2000), 42 of the 67 RBQ behaviors have direct CAQ personality item analogues.<sup>23</sup> For example, one CAQ item reads “Is a talkative individual” and its RBQ analogue reads “Is talkative [as observed in this situation]” (see Appendix B for complete list of analogues). Thus, for each of the four situations a personality-behavior congruence index can be computed by correlating the scores of the 42 CAQ personality item analogues with the 42 RBQ behavior item analogues.<sup>24</sup> This profile correlation, computed separately for each participant in each situation, represents the degree to which that participant’s behavior was congruent with his or her personality for each of his or her reported situations. The histograms of these personality-behavior congruence scores for each session are displayed in Figure 3-1. In addition the means and standard deviations for each session are displayed on the left side of Table 3-1.

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<sup>23</sup> Of these 42 CAQ-RBQ item pairs 41 have previously been used to estimate the degree to which acquaintance and stranger CAQ ratings can predict behavior in an experimental context (see Colvin & Funder, 1991).

<sup>24</sup> Two CAQ personality items, numbers 14 and 88, were reverse scored to match the direction of their behavioral RBQ item analogues.



*Figure 3-1.* Histograms of personality-behavior congruence scores within situations reported at each of four measurement sessions. At each session, participants reported on a situation they had encountered at a specified time within the past 24 hours, and their behavior in it. The vertical line indicates baseline level of personality-behavior congruence obtained by chance (approximately  $r = .30$ ).

Table 3-1.

One-sample t-tests comparing average congruence to baseline profile agreement.

| Session   | Avg. Congruence | Baseline | <i>t</i> | df  | <i>p</i>                | <i>r</i> <sub>effect size</sub> |
|-----------|-----------------|----------|----------|-----|-------------------------|---------------------------------|
| Session 1 | .40 (.27)       | .28      | 6.98     | 204 | 1.969x10 <sup>-11</sup> | .44                             |
| Session 2 | .39 (.27)       | .28      | 6.35     | 202 | 6.909x10 <sup>-10</sup> | .41                             |
| Session 3 | .37 (.28)       | .28      | 5.25     | 201 | 1.913x10 <sup>-7</sup>  | .35                             |
| Session 4 | .39 (.26)       | .30      | 5.39     | 202 | 9.639x10 <sup>-8</sup>  | .35                             |

Note. Standard deviations in parentheses.

It should be noted that each participant reported a unique set of four situations across the four sessions to the lab; thus the four sessions in Figure 3-1 and Table 3-1 differ only according to the session at which they were reported and are otherwise not systematically different from each other. They are reported separately for the sake of completeness and to demonstrate the degree to which the overall results remain stable across four quasi-independent replications (i.e., while the sample of participants in each was the same, the situations were different). Across all participants in all situations, the three situations in which participants displayed the highest levels of personality-behavior congruence were, “I was looking at what credits cards I have to pay and what dates along with my boyfriend” ( $r = .82$ ), “At about 2pm, I had just woken up from a long night of sleeping. I chose to use my laptop to use the internet for the next few hours” ( $r = .81$ ), and “Yesterday at 5pm I was at Circuit City with my boyfriend buying a camera” ( $r = .81$ ). The three situations in which participants displayed the lowest levels of congruence were, “Walking to Scott’s [a campus market] to get a Turkey club sandwich my room mates had went and left me behind” ( $r = -.49$ ), “I was trying to finish up an English project at the last min. I have been procrastinating for months, I thought was one of the pretty worst and stressful days of my life” ( $r = -.36$ ), and “Playing soccer with my fraternity brothers, sisters, and the pledges” ( $r = -.34$ ).

These descriptions are only meant to provide a feel for the types of situations in which individual participants in this study experienced the most and least amounts of congruence. However, as will soon be seen, the reasons for congruence for these participants in these situations often differ.

*Hypothesis 1: In general, people will demonstrate a substantial degree of personality-behavior congruence.*

While the histograms in Figure 3-1 clearly show the average amount of congruence at each measurement occasion was considerably greater than  $r = .00$ , it is possible that the levels of congruence displayed merely reflect the fact that people, on average, are higher on some traits than others and have a tendency to display some behaviors, on average, more than others. For this reason, the correlation between any two randomly-selected personality and behavioral profiles could be expected to be greater than zero. This problem is similar to the problem of *stereotype accuracy* (Cronbach, 1955; Funder, 1980), or *normativeness* (Furr, 2008), in the personality judgment literature. To account for it, we computed a baseline level of personality-behavior congruence by calculating the similarity of each personality profile to the behavior profile for each non-paired participant. That is, we correlated person 001's personality profile with person 002's behavior profile and so on for each non-matching personality-behavior pair. This was done separately for each of the four situational reporting sessions yielding an average baseline personality-behavior correlation of about .30 (see Figure 3-1). One-sample *t*-tests comparing the obtained congruence scores to this baseline confirmed that the average personality-behavior correlation, which was slightly less than .40, was

significantly greater than this baseline in every case (all  $ps < .001$ ). The full results of these analyses are displayed in Table 3-1. Of note, while the difference between the observed congruence of approximately .40 and the baseline level of .30 may seem small, as indicated in Table 3-1, the effect size for this difference is quite large (average effect size  $r = .39$ ). People are on average congruent and hypothesis 1 is supported.

*Hypothesis 2: Individuals who exhibit greater personality-behavior congruence will manifest greater psychological adjustment.*

Despite a general tendency for people to be congruent, both the histograms in Figure 3-1 and the standard deviations in Table 3-1 indicate that there are sizeable individual differences in congruence. This is important because without variation in personality-behavior congruence, it would be impossible for individual differences in psychological adjustment to predict it. To test hypothesis 2, hierarchical linear modeling (using R's nlme package; Pinheiro & Bates, 2000) was employed because as noted previously, each participant's congruence was measured at four different time points. Following Raudenbush and Bryk (2002) this yielded a data set where 204 participants served as level-2 units and were measured on a total of 816 occasions which served as level-1 units.<sup>25</sup> First, an unconditional cell means model was estimated to determine whether a multilevel modeling approach was warranted. The intra-class correlation (ICC1) was .46 and the average within person reliability (ICC2) was .77, meaning that

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<sup>25</sup> All analyses presented here treat the independent variables as fixed effects.



individuals reliably differed from one another in their average level of congruence across four measurement occasions and that a multilevel modeling approach was warranted.<sup>26</sup>

To determine whether individual differences in average levels of congruence were related to psychological adjustment, the aforementioned psychological adjustment composite was entered into the model as a level-2 predictor of congruence.<sup>27</sup> The standardized beta for adjustment predicting congruence was  $\beta = .40$  ( $SE = .05$ ), which was statistically significant,  $t(198) = 8.33$ ,  $p < .0001$ . Thus, hypothesis 2 is supported. To test the possible alternative hypothesis that congruence has a curvilinear relationship with adjustment such that persons with extremely low and extremely high levels of congruence are both less well-adjusted, the mean congruence score for each participant across his or her four situations was computed. After standardizing adjustment and these mean congruence scores (across participants) a regression model using both a linear and quadratic congruence term to predict adjustment was estimated. This model showed no indication of a quadratic relationship between congruence and adjustment ( $\beta = .02$ ,  $t(197) = .447$ ,  $p = .655$ ).

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<sup>26</sup> In addition to the analyses presented here, preliminary analyses revealed that participant gender, participant ethnicity (asian vs. non-asian), measurement occasion, and situation time of day (10am, 2pm, 5pm, 9pm) had no relation to congruence or any of the predictor variables.

<sup>27</sup> Of note, for all multilevel model analyses reported, all variables were first “grand” standardized such that individual scores reflect differences from the average score on that variable divided by the standard deviation of that variable across all persons and all measurement occasions.

*Hypothesis 3: Personality-behavior congruence will be less in strong situations than in weak ones, as predicted by the Strong Situation Hypothesis.*

To test the Strong Situation Hypothesis (Mischel, 1977; Snyder & Ickes, 1985) it was first necessary to quantify the degree to which each situation experienced by the participants was characterized by the properties that the hypothesis outlines. To do so we employed a template matching approach (Bem & Funder, 1978). Specifically, two independent raters familiar with the Strong Situation Hypothesis rated the prototypical strong situation using the RSQ-sort rating procedure outlined previously. These two ratings were averaged to form a template reflecting the prototypical strong situation.<sup>28</sup> The three RSQ items with the highest composite rating for the strong situation template were, “Context includes explicit or implicit demands on P[erson],” “Situation includes implicit or explicit behavioral limits,” and “P[erson] is being pressured to conform to the actions of others.” The three RSQ items with the lowest composite rating for the strong situation template were, “Affords an opportunity to express unusual ideas or points of view,” “Situation is uncertain or complex,” “Affords the opportunity to ruminate, daydream or fantasize.” This composite template was then correlated with each participant’s description of each situation to create a template match score reflecting the degree to which it could be considered a strong situation. These template match scores ( $M = .01$ ,  $SD = .16$ ) were then entered into a multi-level analysis as a level-1 predictor of congruence. The resulting standardized beta was  $\beta = -.26$  ( $SE = .03$ ) which was statistically significant,  $t(604) = -8.80$ ,  $p < .0001$ . Thus, hypothesis 3 was supported.

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<sup>28</sup> The correlation reflecting the agreement between the two raters was  $r = .54$  and so the reliability of the composite was  $.70$ .

*Hypothesis 4: Personality-behavior congruence will be higher in situations that afford one's autonomy, relatedness to others, and competence needs to be met, as set forth by Self-determination Theory.*

A similar approach was used to test the fourth hypothesis, that the components of Self-determination Theory (Deci & Ryan, 1987; 2000; Ryan & Deci, 2000), would predict variation in personality-behavior congruence. Two independent raters familiar with the theory<sup>29</sup> used the RSQ to describe the ideal situation that would promote autonomy, the ideal situation that would promote relatedness to others, and the ideal situation that would promote feelings of competence. These two ratings were averaged to create templates reflecting the prototypical autonomy-promoting situation ( $r = .58$ ,  $\alpha = .73$ ), the prototypical relatedness to others promoting situation ( $r = .67$ ,  $\alpha = .80$ ), and the prototypical competence promoting situation ( $r = .68$ ,  $\alpha = .81$ ). The three RSQ items with the highest composite rating for the autonomy promoting situation template were, "Situation allows free range of emotional expression," "Affords an opportunity to express unusual ideas or points of view," and "Affords an opportunity to express one's charm." The three RSQ items with the lowest composite rating for the autonomy promoting situation template were, "P[erson]'s independence and autonomy is questioned or threatened," "P[erson] is being pressured to conform to the actions of others," and "Situation includes implicit or explicit behavioral limits." The three RSQ items with the highest composite rating for the relatedness to others promoting situation template were, "Context includes potential for immediate gratification of desires," "Close

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<sup>29</sup> These two raters were different from the previously mentioned raters used to form the strong situation composite.

personal relationships are present or have the potential to develop,” and “Talking is permitted, invited, or conventionally expected.” The three RSQ items with the lowest composite rating for the relatedness to others promoting situation template were, “P[erson] is being criticized, directly or indirectly,” “P[erson] is being insulted, directly or implicitly,” and “Someone [present or discussed] is unhappy or suffering.” Lastly, the three RSQ items with the highest composite rating for the competence promoting situation template were, “Affords the opportunity to demonstrate intellectual capacity,” “Affords an opportunity for demonstrating verbal fluency,” and “Context includes intellectual or cognitive stimuli.” The three RSQ items with the lowest composite rating for the competence promoting situation template were, “P is being criticized, directly or indirectly,” “P is being insulted, directly or implicitly,” and “Situation is uncertain or complex.” Next, these templates were correlated with each participant’s description of each situation to create a template match score reflecting the degree to which it could be considered an autonomy-promoting, relatedness promoting, and competence promoting situation respectively. Before testing hypothesis 4, we first examined the inter-correlations amongst these SDT templates (provided by the raters) and the subsequent template match scores. The autonomy template correlated  $r = .56$  with the relatedness template and  $r = .47$  with the competence template while the relatedness template correlated  $r = .40$  with the competence template. This implies that, on a theoretical level, situations in which one’s autonomy needs are met may also meet one’s relatedness and competence needs (and vice-versa). The inter-correlations among the template match scores—across all participants across all measurement occasions—were even more

telling as the autonomy template match scores ( $M = .18$ ,  $SD = .19$ ) correlated  $r = .86$  with relatedness template match scores ( $M = .25$ ,  $SD = .24$ ) and  $r = .45$  with the competence template match scores ( $M = .29$ ,  $SD = .16$ ) while the relatedness template match scores correlated  $r = .36$  with the competence template match scores. Thus, despite their theoretical differences, the empirical relationship between being in situations in which one's autonomy needs are met and in which one's relatedness to others needs are met are very highly overlapping. While the degree to which one's competence needs are being met is still related to the degree to which one's other two needs are being met, the correlation is not so strong as to consider the constructs overlapping to a very great degree.

Several different multi-level models were analyzed to test hypothesis 4. First, a multi-level model with the template match scores serving as a level-1 predictor of congruence, was computed independently for each of the three SDT template match scores. As hypothesized, all three predictors were statistically significant predictors of congruence with standardized betas of .41, .43, and .33 (*all SEs* = .03, *ts* > 10.88, and *ps* < .0001) for autonomy, relatedness, and competence respectively. Next, all three SDT predictor variables were entered into the model at level-1 as simultaneous predictors. In this model, only relatedness and competence remained statistically significant predictors ( $\beta$ s = .39 and .21, *SEs* of .05 and .03, *ts* of 8.08 and 7.19, *ps* < .0001 and <.0001, respectively). The autonomy predictor was reduced to  $\beta = -.02$  which was due to the aforementioned high multi-collinearity with the relatedness predictor. However, the meeting of one's competence needs still remained a unique predictor of congruence when

controlling for the degree to which one’s autonomy and relatedness needs were being met. This implies that despite the sizeable correlations between the competence predictor and the other two highly overlapping autonomy and relatedness predictors, the competence predictor provides additional unique information about congruence.

As a follow up exploratory analysis, we examined a model of congruence using both level-2 (i.e. person level-psychological adjustment) and level-1 (i.e. situation level-template match scores) predictors. Before doing so however, we first examined the inter-correlations amongst all of the possible predictor variables (calculated as correlations across all persons and measurement occasions) and congruence. These correlations are shown in Table 3-2.<sup>30</sup>

Table 3-2.  
Bivariate Correlations between Congruence and Predictor Variables.

|                        | 1  | 2    | 3    | 4    | 5    | 6    |
|------------------------|----|------|------|------|------|------|
| Congruence (1)         | -- | -.28 | .45  | .47  | .42  | .40  |
| Situation Strength (2) |    | --   | -.82 | -.65 | -.10 | -.12 |
| Autonomy (3)           |    |      | --   | .86  | .45  | .15  |
| Relatedness (4)        |    |      |      | --   | .36  | .11  |
| Competence (5)         |    |      |      |      | --   | .14  |
| Adjustment (6)         |    |      |      |      |      | --   |

As Table 3-2 shows, amongst the predictors of congruence, there is substantial overlap between the situation strength template match scores, the autonomy template match scores, and the relatedness to others template match scores (all  $|rs| > .65$ ). Thus, for the purposes of this follow up analysis, only psychological adjustment, relatedness to

<sup>30</sup> Note that the correlations in Table 2 are nearly identical to correlations that treat each participant’s situation independently and meta-analytically combine the correlations across the four measurement occasions.

others, and competence were used as predictors of congruence.<sup>31</sup> In addition, we examined the possible interaction between psychological adjustment and the degree to which situations met one's relatedness to others needs. The results of this analysis are displayed in Table 3-3.

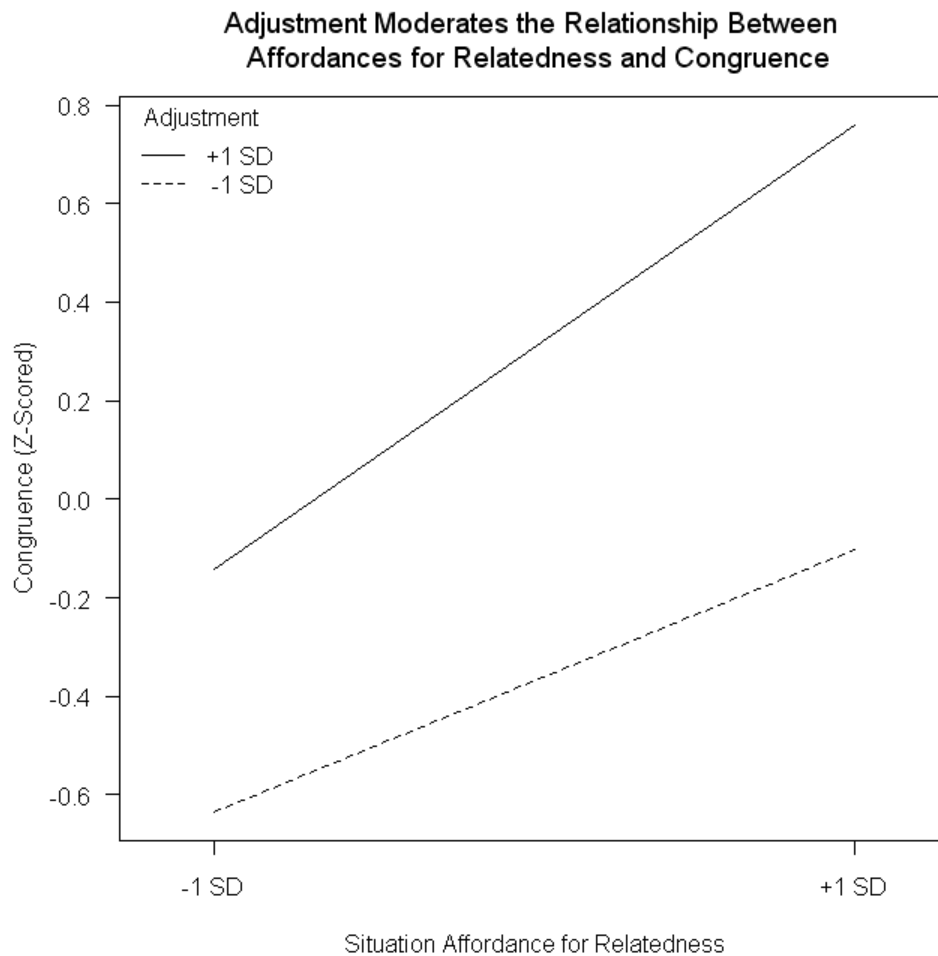
Table 3-3.  
Multi-level Regression Predicting Congruence from Person and Situation Variables

| Predictor                          | $\beta$ | <i>SE</i> | df  | <i>t</i> | <i>p</i> |
|------------------------------------|---------|-----------|-----|----------|----------|
| Adjustment                         | .34     | .04       | 198 | 8.15     | <.0001   |
| Relatedness to Others              | .36     | .03       | 590 | 13.65    | <.0001   |
| Competence                         | .20     | .03       | 590 | 7.08     | <.0001   |
| Adjustment x Relatedness to Others | .09     | .02       | 590 | 3.61     | .0003    |

Note. Coefficients are standardized betas.

As Table 3-3 shows, both person-level variables (i.e. psychological adjustment) and situation level variables (i.e. relatedness and competence affordances) uniquely contribute to the prediction of personality-behavior congruence. In addition, the interaction between psychological adjustment and the degree to which situations meet one's relatedness to others needs implies that the relationship between situational affordances for relatedness to others and congruence varies depending on one's level of psychological adjustment such that well-adjusted persons get a bigger boost towards congruence in situations that meet their relatedness to others needs compared to those who are less well-adjusted. A graphical display of this result is shown in Figure 3-2.

<sup>31</sup> Of note, if either Autonomy or Situation Strength is used in place of Relatedness to Others in this analysis the results are nearly identical.



*Figure 2-2.* Figure displaying how the relationship between situational affordances for meeting one’s relatedness to others needs and personality-behavior congruence varies as a function of one’s level of psychological adjustment.

### Discussion

All four hypotheses outlined at the beginning of this article were supported: 1) within each of four situations reported from their daily lives, people demonstrated a significant amount of personality-behavior congruence, 2) psychologically well-adjusted individuals displayed higher levels of personality-behavior congruence than did less well-adjusted individuals, 3) people displayed more personality-behavior congruence in



situations low in situational strength, as predicted by the Strong Situation Hypothesis, and 4) people displayed more personality-behavior congruence in situations that met one's autonomy, relatedness to others, and competence needs as predicted by Self-determination Theory. In addition to supporting these four hypotheses, the results of this study also rule out an alternative hypothesis implying a curvilinear relationship between congruence and psychological adjustment. Further, the results of this study indicate that both a person-level variable (i.e. psychological adjustment) and situational-level variables (i.e. degree to which one's relatedness and competence needs are met) independently predict the degree to which persons will display congruence between their personality and their behavior. Thus, when determining how likely it is that a person's behavior will match his or her personality seems to be dependent at the very least on how psychologically well-adjusted the particular individual is and how well the particular situation meets the individual's relatedness to others needs, competence needs, and allows the individual to feel autonomous or unrestrained (i.e. a weak situation). This is perhaps most directly seen by the fact that the highest levels of congruence were displayed by people who were both well adjusted and in situations that promoted both relatedness and competence. For example, one participant who scored 1.77 SDs (the 8<sup>th</sup> highest congruence score in the sample) above the mean on congruence described his situation as, "Thursday night at nine I was doing homework. I was at my desk in my dorm at Lothian. I was with my girlfriend, she was doing homework also. I was doing chemistry work and she was doing Spanish, this went on for a couple hours." This participant was well-adjusted (Z-scored adjustment = 1.44) and felt his relatedness to

others (Z-scored relatedness template match = 1.21) and competence (Z-scored competence template match = .93) needs were being met. However, sometimes participants achieved high levels of congruence despite the fact that one set of factors was working against him or her. For example, one well-adjusted participant (Z-scored adjustment = 1.79) reported high levels of congruence (Z-scored congruence = 1.79; 5<sup>th</sup> highest in the sample) despite that fact that this participant's relatedness to others needs (Z-scored relatedness template match = -1.91) and competence needs (Z-scored competence template match = .20) were not well met in the situation this participant described as, "I hadn't gotten much sleep the night before. I just sat in a chair contemplating what needed to be done for my next class." Still other times participants who were generally well-adjusted displayed low levels of congruence because their situations did not meet their needs. For example, one relatively well-adjusted participant (Z-scored adjustment = 1.26) displayed low levels of congruence (Z-scored congruence = -3.70; lowest congruence score in the sample) in the situation, "Walking to Scott's to get a Turkey club sandwich my room mates had went and left me behind" likely because his relatedness to others needs were not well met (Z-scored relatedness template match = -1.70) nor were his competence needs being met (Z-scored competence template match = -2.52). As we hope the results of this study and these examples make clear, the degree to which one displays congruence between his or her personality and his or her behavior in a given situation is a function of two relatively independent forces—namely the person's level of psychological adjustment and the degree to which the situation meets his or her needs.

This study also demonstrated that the implications of the strong situation hypothesis and the autonomy and relatedness to others components of Self-determination Theory are closely related. On the level of theory Autonomy and Situation Strength both describe a property of situations that allows for the free expression of individual differences in personality. On an empirical level, the findings of the present study showed that situations that match the description of the weak situation also tend to match the description of one that is high in autonomy. In addition, actual situations experienced by participants fitting the theoretical description of a weak and/or autonomy need meeting situation also closely fit the theoretical description of a situation that meets one's relatedness to others needs. This implies that while situation strength and the autonomy and relatedness components of SDT are conceptually different, they all have similar theoretical predictions and consequences in terms of their situational properties. Further, the overlap between the situational properties outlined by these different conceptions is even greater in practice than in theory. This implies that in real world settings when one is in a relatively weak situation, it is also very likely that one's autonomy needs and relatedness to others needs are well met. Although not hypothesized at the outset, one explanation for this result is provided by self-verification theory which proposes that people prefer others that see them as they see themselves (Swann, 1983; *in press*). Specifically, self-verification theory predicts that "people strive for self-verification by gravitating toward interaction partners and settings that seem likely to provide self-confirming evaluations" (Swann, *in press*). Further if people choose environments which provide them with self-verifying feedback, presumably they feel compelled to behave

more like themselves in such environments. Thus, if people have chosen friends who allow them to be themselves, it is not surprising that people display the most congruence around their friends. Indeed, nearly every situation in this sample in which participants displayed low levels of congruence, participants also reported low levels of their relatedness to others needs being met and in most situations in which participants displayed high levels of congruence participants reported high levels of their relatedness to others needs being met. Further, many of the descriptions of these highly congruent situations contained the words, “friend(s),” “family,” “boyfriend,” or “girlfriend.” Thus, to a large degree, when people were with their friends, family or relationship partners, people displayed the most congruence between their personality and their behavior.

#### *A Methodological Note*

In addition to the substantive findings, this study also provides an important methodological contribution in that it demonstrates how one may use the RSQ to test psychological theory. In this case the RSQ was used to derive theoretical templates for the Strong Situation Hypothesis and for the three needs outlined by Self-Determination Theory. Then, following Bem and Funder’s (1978) template matching approach, these templates were used to create scores reflecting the degree to which participants in this study encountered situations specified by those theories. Of course, this approach rests on the supposition that the theoretical templates in fact reflect the psychological theory of interest. Thus, one may question whether or not these theoretical templates can be created by anyone or whether they require “true” experts in the particular theory for their construction. We contend that when relatively intelligent individuals are used to create

such templates, that a well explicated psychological theory should be easily translatable into such templates. It happens that in this study we were able to put this idea to the test. For the three components of SDT examined in this study, Rich Ryan and Ed Deci—no doubt the two foremost theorists behind SDT—were so kind as to indicate for each of the 81 RSQ items which ones were relevant to each component by marking each item as either “positively related,” “neutral,” or “negatively related” to the theory. Using their indicators as scoring keys, a composite score could be formed for each SDT component for each situation participants experienced. In these data, the composite scores created using Ryan and Deci’s scoring key were highly correlated with the template match scores derived using the method described in the Results section with  $r$ s of .82, .84, and .60 for Autonomy, Relatedness to Others, and Competence respectively. In addition, analyses that used Ryan and Deci’s key to create composite ratings of the SDT components rather than the template match scores described in the results section were nearly identical in terms of their effect sizes and  $p$ -values. Thus we believe that when the psychological theory of interest is well defined, competent persons (e.g. advanced level undergraduate students, graduate students, and academic psychologists) who are presented with the theory can construct RSQ templates that reflect the psychological theory.

### *Implications*

These findings have several implications for personality and social psychology. First, to our knowledge no one has previously examined the relationship between personality and behavior, which we have termed personality-behavior congruence, using a person-centered approach in the manner of the present study. This research answers the

decades-old call by Lamiell (1981) who asked for ways to assess personality at the level of the individual that did not rely upon comparisons with other individuals. The person-centered approach used here does exactly that. Unlike more familiar methods that correlate single attributes of personality and behavior across a sample of individuals, the present person-centered method calculates personality-behavior congruence for each individual in each situation. One reason why few if any empirical investigators previously answered Lamiell's call may be that to do so requires a large number of personality attributes as well as a large number of behaviors to be simultaneously assessed for each individual so that the pattern of the two can be compared. In the present study, the personality-behavior profiles were compared along 42 matching attributes. In the end, the new method yielded a familiar result. Although the controversy surrounding the person-situation debate seems to have largely receded (Funder, 2009a), it is reassuring to find that when the relationship between personality and behavior over the course of several weeks is examined using this distinctive person-centered method, personality remains a consistent predictor of behavior.

Second, this study adds to the growing body of empirical evidence that behavioral consistency that emanates from behaving more in accord with one's characteristic personality and being less susceptible to fluctuating situational demands is an indicator of psychological adjustment. In addition to prior, classic theorizing by Rogers (1959) and by Jourard (1963), the Shakespearean advice "to thine own self be true" (*Hamlet*, Act 1, Scene 3) might seem to apply here. While several previous studies established that behavioral consistency is generally associated with good psychological adjustment, the

present results imply that this consistency comes about because of a coherent match between personality characteristics, on the one hand, and behavioral manifestations of those characteristics, on the other. The successful construction of a stable identity that can guide one's behavior across a wide range of situational contexts may be a marker of psychological maturity. Consider the stormy adolescent, who must create a different identity for every situation until attaining, at maturity, a stable personality that serves him or her well across contexts. One implication of this theorizing is that people at difficult periods of their lives, such as adolescence or other times of major transition, might manifest less personality-behavior congruence. This implication deserves to be examined in future research.

Third, this study directly examines two theoretical predictions about situational influences on personality-behavior congruence. Both the Strong Situation Hypothesis (Mischel, 1977; Snyder & Ickes, 1985) and Self-determination Theory (Deci & Ryan, 2000; Ryan & Deci, 2000) imply that some situations better promote the expression of the individual self, while others tend to suppress it. While the predictive templates operationalizing these two theoretical perspectives in the present study were separately derived, in practice they turned out to be highly similar. In retrospect, this is not surprising because it could easily be argued that a situation high in autonomy would be a weak situation, almost by definition. On the other hand, it is not quite as clear that a weak situation would necessarily be high in autonomy. The prediction derived from Self-determination Theory is more specific and, in the present data, was more successful. In any case, it was the ability to operationalize the predictions of both theories using a

common instrument, the Riverside Situational Q-sort, which allowed this similarity in prediction and difference in outcome to be detected.

Indeed, one of the major contributions of this study is its further demonstration of the utility, flexibility, and wide range of application of the RSQ. Implications of the Strong Situational Hypothesis, Self-determination Theory, or any other theory that predicts how attributes of situations should affect behavior cannot be tested without an instrument to assess those attributes (Reis, 2008). The RSQ offers a tool to do precisely this, and as it continues to develop and attain wider use it opens the possibility of enhancing the understanding of situations from a wide variety of theoretical perspectives.



## Chapter 4 – Personality and the Perception of Situations<sup>32</sup>

*For some the world is a hostile place where men are evil and dangerous; for others it is a stage for fun and frolic. It may appear as a place to do one's duty grimly; or a pasture for cultivating friendship and love.*

Gordon Allport (1961, p. 266)

Personality has strong and wide-ranging ties to behavior, but what people do is also importantly affected by the situation. This fact highlights an important historical imbalance in the basic scientific foundation of psychology. For decades, numerous investigators have focused on conceptualizing and quantifying psychological differences between individuals, and a large research literature offers literally thousands of tools for personality assessment. These tools can, in turn, be used to predict behaviors and important life outcomes (Ozer & Benet-Martínez, 2006; Roberts, Kuncel, Shiner, Caspi & Goldberg, 2007). The assessment of situations has lagged far behind. Even researchers who argue for their central importance often neglect to specify the psychologically active ingredients that give situations their power. Instead, the argument has too often been made by subtraction, assuming that whatever behavioral variance is not accounted for by a particular personality variable must be due to the situation (Funder & Ozer, 1983). This state of affairs has begun to change only relatively recently, with investigators drawing renewed attention to the importance of conceptualizing situations (Reis, 2008) and

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<sup>32</sup> The introduction of this chapter is largely based on an NSF grant application to David C. Funder (2011).

beginning to develop tools for situational assessment (Sherman, Nave & Funder, 2010a; Wagerman & Funder, 2009).

One reason why research may have historically shied away from investigating situations is that it must confront a difficult conceptual question. Where do situations exist: in the objective world or in the eye of the beholder? On the one hand, the best direct evidence that situations are important consists of experimental social psychology's many demonstrations that situations have properties that affect all people in the same way or, at very least, enough people in the same way as to generate statistically significant findings. Indeed, the assumption that objective aspects of situations yield predictable behavioral results is built into every interpretation of a significant mean difference between an experimental and control condition. On the other hand, every situation is inevitably filtered through the perceptions of each person who experiences it (Reis, 2008). As Mischel (1977, p. 253) observed, "any given, objective stimulus condition may have a variety of effects, depending on how the individual construes and transforms it" and Bem and Allen (1974, p. 518) went so far as to claim that "the classification of situations...will have to be in terms of the individual's phenomenology, not the investigator's." In other words, these comments imply, what matters is not so much the situation, but each individual's construal of it.

While this point of view seems reasonable, it can be taken too far. Not only is it to some degree contradicted by experimental social psychology (where individual construals generally show up as within-cell error variance), it also raises serious conceptual problems. If situations were defined solely in terms of how individuals

construe them, their analysis would absorb back into the study of personality. For example, imagine two people playing a game. One person is characteristically competitive and the other is not. The first might construe the game as involving and motivating and respond with a high level of activity and engagement. The second might construe the game as pointless and respond with behavioral and emotional withdrawal. The differences in these individuals' behaviors could be explained on the basis of their different perceptions, but in the course of this analysis the situation itself – the actual game – has disappeared. Its objective properties have ceased to be of concern. Instead, analytical focus has returned to differences between individuals, where standard personality analysis began in the first place. Defining situations in terms of construals also opens the risk of circularity. The first person's competitive behavior might be "explained" on the basis of his or her perception of the situation as competition-evoking – which is not very helpful. Thus, if situations are to be deemed important and worthy of study in their own right, they must be separated from the perceptions (and personalities) of the people in them (Reis, 2008; Sherman et al., 2010a).

An objective conceptualization of situations is also necessary to address the two central questions concerning how they are construed: (1) how much and in what ways do two (or more) individuals construe the (objectively) same situation differently? And (2) to what degree and in what ways does an individual's construal of a situation differ from its objective nature? The first question speaks to Allport's (1937, 1961) conceptualization of personality as lying in the different ways individuals perceive and therefore respond to the same situation. The second goes to Henry Murray's (1938) classic distinction

between “alpha press,” the situation as it is, and “beta press,” the situation as it is perceived. Discrepancies between these two within the same individual, he believed, could reflect not just personality but psychological dysfunction.

Despite its long-recognized importance (Allport, 1937; Murray, 1938), situational construal has been surprisingly neglected by empirical research. A few groundbreaking studies have examined particular aspects. Research on rejection sensitivity has demonstrated that some individuals are prone to interpret ambiguous behaviors from their romantic partners as signs of impending rejection, often with self-fulfilling effects (Downey & Feldman, 1996; Downey, Freitas, Michaelis & Khouri, 1998). Other studies have examined the propensity of aggressive children to interpret ambiguous stories as including characters with hostile intentions (e.g., Dodge, 1993; Dodge & Frame, 1982). These differences in construal may stem from an increased propensity to organize their memories around hostile themes (Zelli, Cervone & Huesmann, 1996; Zelli, Huesmann & Cervone, 1995). While research like this is valuable, few if any studies have addressed the contrast between the situation as perceived and its actual (as opposed to ambiguous) nature. Similarly, it is difficult to find any research that attempts to assess situational construal across a range of properties (rather than just one), in a variety of situations that the individual had actually experienced.

### *The Psychological Assessment of Situations*

The likely cause of the sparseness of research in this area is the fact that until recently (see Sherman et al., 2010a; Wagerman & Funder, 2009) there has been no broad bandwidth measure for assessing the psychologically important properties of situations.

Compared to research in personality assessment, only a small amount of research has attempted to identify critical types or features of situations (see Ten Berge & De Raad, 1999 for a review and Sherman et al., 2010a, for an update). Some studies focused on particular domains such as “anxiety-provoking situations” (Endler, Hunt & Rosenstein, 1962; Krahe 1986) or “academic study situations” (Magnusson, 1971). Furr and Funder (2004) assessed the similarity of six experimental situations in terms of specific overlapping attributes (e.g., the task, the identity of the interaction partner). In a more comprehensive effort, Van Heck (1984) used a lexical approach to identify words that could meaningfully fall into the sentence, “being confronted with a \_\_\_ situation.” A series of ratings and factor analyses yielded 10 categories: interpersonal conflict, joint working, intimacy and interpersonal relations, recreation, traveling, rituals, sport, excesses, serving, and trading. In a similar vein, Edwards & Templeton (2005) used a dictionary and a separate database to find 1039 words that could complete “that situation was \_\_\_” or “that was a \_\_\_ situation.” These words were reduced through ratings and factor analysis to the four factors called positivity, negativity, productivity, and “ease of negotiation.” A particularly interesting study by Yang, Read and Miller (2006) applied the lexical approach to Chinese idioms (e.g. “too late for regrets” and “catching up from behind”) and reduced them through ratings and factor analysis to 20 hierarchically structured clusters all having to do with means of attaining goals. A more theoretically-based approach uses six dimensions derived from interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959), singly and in combination, to classify situations according to an “atlas” (Kelley, Holmes, Kerr, Reis, Rusbult & van Lange, 2003) that

lists the 20 “most common situations encountered in ordinary social life” (Reis, 2008, p. 317).

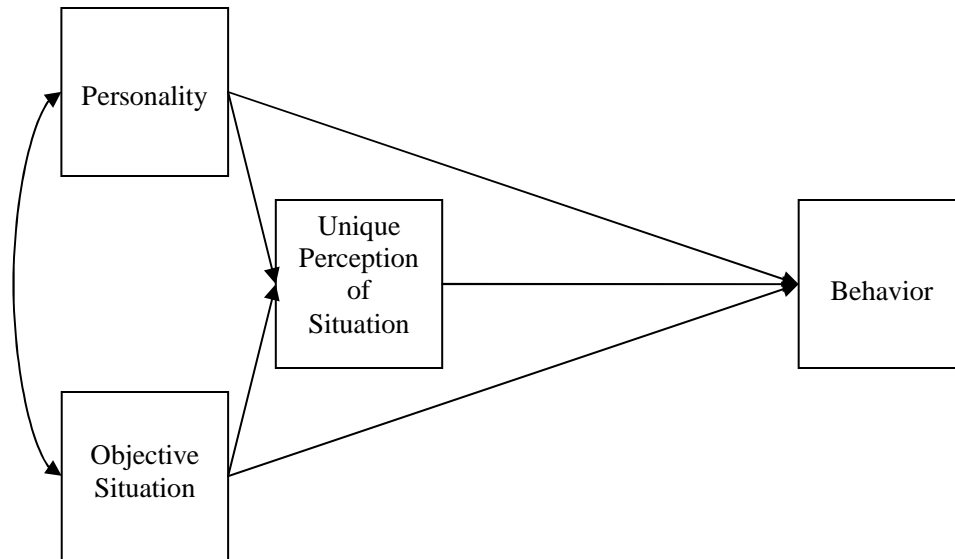
Several recent research programs have turned to behavioral signature approaches, part of the Cognitive-Affective Processing System (CAPS: Shoda & Mischel, 1995) for understanding how persons and situations jointly predict behavior (e.g. Fournier, Moskowitz & Zuroff, 2008, 2009; Vansteelandt & Van Mechelen, 2004). Behavioral signatures are relatively stable and discriminative *if...then...* patterns produced by the interaction between characteristics of the person and his or her situations (Shoda, Mischel & Wright, 1994). Research has demonstrated reasonable stability of these profiles using pre-specified behavioral variables across particular situations of interest (e.g. Shoda et al., 1994; Smith, Shoda, Cumming & Smoll, 2009). However, as Fournier et al. (2008, 2009) pointed out, the CAPS model does little to specify the psychological variables that make one situation different from or similar to another. In response, they created an 11x11 “interpersonal grid” based on the interpersonal circumplex (Leary, 1957) such that the vertical dimension characterized dominance vs. submissiveness and the horizontal dimension characterized quarrelsomeness vs. agreeableness. Participants rate each social interaction they experience by marking the behavior of their primary interaction partner on the grid. In another approach stemming from the CAPS model, Van Mechelen (2009) and colleagues employed multidimensional scaling to identify types of persons, or person-behavior profiles, based on behavioral responses to hypothetical situations (see also Bem & Funder, 1978). In an illustrative application, Vansteelandt and Van Mechelen (2004) demonstrated three person profiles for 10 “anger” responses (e.g., slams door,

says nasty things, loses temper) in three hypothetical frustration inducing situations (e.g., a fellow student lost your 15 page exam paper and no other copy exists).

While the approaches just summarized have promise, taken as a whole they offer a large, even bewildering variety of typologies of situations. Some are of limited range, being restricted to experimental, anxiety-provoking, or interpersonal situations. Others are lexically-based organizations of hypothetical rather than real situations. Almost uniformly, the past literature has fallen short in one important regard. It has failed to provide a method for quantifying a wide range of psychological properties of situations or, as Reis (2008) noted, systematically comparing one situation to another. Yet the challenge for research goes beyond identifying dimensions or types, to developing a generally useful tool for situational assessment. The present study uses a recently developed measure, the Riverside Situational Q-Sort (RSQ; Sherman et al., 2010a; Wagerman & Funder, 2009), to examine the degree to which one's unique view—or construal—of psychological properties of situations might vary as a function of personality as hypothesized by Allport (1937; 1961) and Murray (1938).

### *The Current Study*

The goal of this research is to examine the ways in which personality may be related to unique perceptions, or construals, of the situations people encounter in their daily lives. To this end, we introduce the Situation Construal Model (see Figure 4-1).



*Figure 4-1. Situation Construal Model.*<sup>33</sup>

The Situation Construal Model makes a number of straightforward predictions. First, it predicts that there is a relationship between psychological properties of individuals (the box labeled Personality) and objective psychological properties of situations (the box labeled Objective Situation). Empirical evidence for this relationship is already in existence (Snyder & Gangestad, 1982; Snyder & Kendzierski, 1982). Second, this model predicts that there is a direct relationship between personality and behavior. While at one time such evidence was surprisingly rare, the literature is now filled with evidence that such links exist (Colvin & Funder, 1991; Fast & Funder, 2008; Funder & Sneed, 1993; Gosling, Ko, Mannarelli, & Morris, 2002; Holtzman, Vazire, & Mehl, 2010; Nave, Sherman, Funder, Hampson, & Goldberg, 2010; Vazire & Mehl, 2008). Third, the

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<sup>33</sup> This model is adapted from an NSF Grant application of David C. Funder (Funder, 2011).



Situation Construal Model predicts that objective features of situations have direct effects on behavior, which is consistent with the wide literature from experimental social psychology (Richard et al., 2003). Fourth, the Situation Construal Model predicts that one's unique perception of a situation, or construal, is made up of both objective features of the situation and one's own personality. Finally, the model predicts that these unique perceptions of situations predict behavior over and above the effects of personality and objective features of the situation alone. This is similar to the proposition made by Reis (2008) that situations provide affordances for behavior and that a person's perceptions of these affordances lead to behavior. Because little research has focused on the link between personality and unique perceptions of situations, the purpose of this study is to examine this relationship.

To accomplish this, a short-term longitudinal design was employed. Participants in this study completed five lab sessions over the course of a five week time period. During the first of these lab sessions, participants provided information about their own personalities. This included a large number of personality measures including measures of Well-Being, Depression, the Big Five, and Narcissism. Specific details for each of these are outlined in the Method section. During the remaining four of these lab sessions—spread out across the remaining four weeks—participants recorded on a 3x5 index card what they were doing the previous day at a specified time. After doing so, participants rated that situation on 81 psychological properties of situations using the Riverside Situational Q-Sort Version 2.0 (see Measures heading in the Method section; for a fuller developmental description see Sherman et al. [2010a] and Wagerman and

Funder [2009]). Later, four research assistants, from a pool of 22, independently read the situations written on the 3x5 index cards and rated each situation on the 81 psychological properties of situations that make up the RSQ. These four ratings were averaged to form a composite “consensual view” of what that situation was like. Then, using linear regression these consensual views of each situation were partialled out of the participant’s ratings of the situation to leave only residuals of the participant’s ratings which represent the participant’s unique view, or construal, of his or her situation. The relationships between these construals and a large battery of personality traits were then examined.

### *Hypotheses*

Although the questions addressed by this study have to our knowledge not been directly examined before, a number of hypotheses can be generated based on previous theory and research. First, in regard to the general question of whether or not personality is related to unique perceptions of situations, clearly Allport (1961) suggests that the answer is yes. Thus, we hypothesize that personality—broadly defined—should be related to unique perceptions of situations. Second, in regard to individual traits (e.g. Well-Being, Openness, etc.) a number of hypotheses are also apparent from previous research. Specifically, in regard to the Big Five personality traits it makes sense to suspect that persons high on Agreeableness should tend to perceive their situations as more cooperative, less competitive, and less insulting compared to those low on Agreeableness. Persons high on Conscientiousness should tend to uniquely perceive their situations as ones in which it is important to do their absolute best, to be perceived as

hard-working, and where success is important, as compared to those who are lower on Conscientiousness. Persons high on Extraversion should tend to uniquely perceive their situations as opportunities to grab the attention of others and to socialize with others as compared to those low on Extraversion. Persons high on Neuroticism should construe their situations to be more anxiety inducing, more negative, and more insulting than those low on Neuroticism. And people high on Openness should tend to perceive their situations to be more aesthetically pleasing and to be more intellectually stimulating compared to persons low on Openness. Persons who are depressed should tend to perceive their situations as more negative, as more limiting, and as eliciting more self-pity than those who are less depressed. On the other hand, persons who are high in Well-Being should tend to construe their situations to be less stressful, more pleasant, and enjoyable than persons lower on Well-Being (Lyubomirsky, 2001; Lyubomirsky & Dickerhoof, 2010; Lyubomirsky & Tucker, 1998). Finally, persons who are high on Narcissism should tend to construe their situations as opportunities to grab the center of attention, to advance their sexual prowess, to express their charm, and to control others compared to those who are less Narcissistic.

While these predictions are consistent with previous research and in many respects lay perceptions of what makes people different from one another, it is also important to consider how large one would reasonably expect these effects to be. That is, if we predict that persons high on Openness, for example, should tend to perceive their everyday situations as more aesthetically pleasing and intellectually stimulating than those lower on Openness, how large should we expect this effect to be? To address this

question, it is important to consider what makes up one's perception of situations.

According to Murray (1938) a perception of a situation contains both *alpha press*, the actual objective properties of the situation, and *beta press* one's unique construal of those properties. Thus, the focus of this study is on the degree to which personality is related to beta press. From a statistical point of view, for the relationships between personality and unique perceptions of situations to be large, there must be both variability in personality and unique perceptions. Of course, previous literature has demonstrated wide variability in personality, however there is good reason to suspect that, relative to the variability in personality, the variability in unique perceptions of situations is relatively small. First, research on person perception (e.g. Funder, 1999; Kenny, 1994) has repeatedly demonstrated that people are accurate perceivers of others in their social worlds. Given that people can accurately perceive others, it follows that people are likely to be accurate perceivers of their social contexts (i.e. situations) as well. Indeed, in many respect the entire enterprise of experimental social psychology relies on the fact that people tend to perceive their experimental manipulations (i.e. situations) similarly and accurately. Thus, it makes sense to assume that people are in general accurate perceivers of their situations. The implication for this is huge for research on how unique perceptions of situations are related to personality. Specifically, this means that when decomposing one's perception of a situation into the constituent parts outlined by Murray (1938) the majority of the variance in such a perception should be due to the objective features of the situation as they are, or the alpha press and only a small portion of the variance in a perception of a situation should be due to unique construal, or the beta press.

This means that while there are good theoretical and empirical reasons to believe that personality is related to unique perceptions of situations, there is good reason to suspect that these relationships are relatively small, particularly when compared to other effect sizes in social and personality research. Thus, we predict that although we expect to find specific theoretically guided relationships between personality and unique perceptions of situations, we anticipate that the effect sizes ought to be small compared to typical effect sizes in personality and social psychological research.

## Method

### *Participants*

Two-hundred and twenty-one undergraduate participants from the University of California, Riverside were solicited via fliers and through an online university psychology participant pool. Data collection began in the fall of 2007 and concluded in the spring of 2009. Because this research gathered reports during multiple lab sessions across 5 weeks and because data regarding situations participants experienced were not gathered until the second session, participants who only completed the first session (N=12) could not be included in further analyses. In addition, amongst the remaining 209 participants, 3 participants completed the study twice; data from their second participation were dropped. Finally, one was dropped for suspicion of random reporting. This left a final sample of 205 (105 Female, 100 Male) participants on whom the following analyses are based. The ethnic breakdown for this sample was: 38% Asian, 27% Hispanic/Latino, 13% Caucasian, 13% Other, and 1% No Response. Two male participants only completed the first two sessions, thus analyses including data from

sessions 3-5 have a total of 203 participants, however because of missing data on some measures the Ns for any particular analysis in any given session may be slightly lower. Participants were compensated \$12.50 per hour, with a maximum payment of \$75.00 if they completed all 5 sessions.

### *Procedure*

Participants came to the lab for a total of five sessions over the course of five weeks. The sessions were at least 48 hours apart. During the first session participants received information about the study and completed demographic questionnaires and many personality measures (see Measures section). During the second session, participants were asked to describe a situation they had been in the day before at one of four pre-specified times (10am, 2pm, 5pm, or 9pm) by writing down what they were doing on a 3x5 index card. Participants were instructed to specify only one situation. For example, if a participant said that at 5pm he was going shopping then eating dinner with his mom, we asked the participant to revise to specify only one of these. In addition, participants were instructed that if they were sleeping at the indicated time they should write down what they were doing right before they went to sleep or right after they woke up. Participants were then asked to describe the psychological characteristics of that situation using the Riverside Situational Q-Sort Version 2.0 (RSQ: Sherman et al., 2010a; Wagerman & Funder, 2009) using a computer based Q-sorter program developed in our lab.<sup>34</sup> This procedure for the second session was then repeated for each of the next three

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<sup>34</sup> Go to <http://rap.ucr.edu/qsorter/> for more information about this program and a free, downloadable copy. This website also includes complete lists of the CAQ & RSQ items used in the present study.

sessions over the course of the next three weeks, again, with each session being at least 48 hours apart from the previous.<sup>35</sup>

### *Measures*

California Adult Q-Sort. The California Adult Q-Sort (CAQ: Block, 1978; as modified for use by non-professionals by Bem & Funder, 1978) contains 100 diverse personality characteristics (e.g., “Is genuinely dependable and responsible”; “Has a wide range of interests”) broadly covering the personality domain. Using the Q-sorting computer program, each participant assessed his or her own personality using the modified CAQ by placing each of the items into one of nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) forming a forced choice, quasi-normal distribution.

Big Five Inventory. The Big Five Inventory (BFI: John & Srivastava, 1999) consists of 44 items that assess the global personality traits of agreeableness, conscientiousness, extraversion, neuroticism, and openness. Each item is rated on a five-point Likert scale (1 = *disagree strongly*, 5 = *agree strongly*) using a computerized testing format. The alpha reliabilities of the five composites were as follows: agreeableness = .78, extraversion = .86, conscientiousness = .82, neuroticism = .80, and openness = .73.

Subjective Happiness. The Subjective Happiness Scale (SHS: Lyubomirsky &

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<sup>35</sup> Because each participant completed four visits and four times were used, the time x visit effects were completely confounded within participants. To counteract this, a modified Latin-square design was used such that approximately 1/4<sup>th</sup> of the participants completed the study using each of the following time sequences: 10am-2pm-5pm-9pm; 2pm-5pm-9pm-10am; 5pm-9pm-10am-2pm; 9pm-10am-2pm-5pm.

Lepper, 1999) is a 4-item global assessment of happiness. Participants rated each item on a 7 point Likert-type scale (e.g. Item 1 – “In general I consider myself: 1 = *Not a very happy person* to 7 = *A very happy person*) using a computerized testing procedure. A subjective happiness score was computed by averaging these four items, with the fourth item being reverse scored. The mean score for this sample was 5.29 ( $SD = 1.10$ ) and the coefficient  $\alpha$  was .80.

Psychological Well-Being. The Psychological Well-Being questionnaire (PWB: Ryff, 1989a; 1989b) includes 84-items that assess well-being along six positively correlated dimensions—Autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance—as well as one overall factor of PWB. Participants rated each item on a six point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*) using a computerized testing procedure. Mean scores on the six dimensions were combined and averaged into an overall PWB measure ( $\alpha = .89$ ) for each participant with higher scores reflecting higher PWB ( $M = 4.46$ ,  $SD = .62$ ).

Beck Depression Inventory. The Beck Depression Inventory II (BDI-II: Beck, Steer, & Brown, 1996) is a 21-item self-report scale that updates a widely-used instrument for measuring the severity of depression (BDI: Beck et al., 1961). Participants rated each item using a 4-point scale ranging from 0 to 3 (e.g. Sadness: “I do not feel sad” (0), “I feel sad much of the time” (1), “I am sad all the time” (2), or “I am so sad or unhappy that I can’t stand it” (3)) using a computerized testing procedure. BDI scores were calculated by summing the ratings on all 21 items. The average BDI score in this



sample was 9.15 ( $SD = 7.10$ ), scores ranged from 0 to 36, and the full scale coefficient *alpha* was .84.

**Narcissistic Personality Inventory.** The Narcissistic Personality Inventory (NPI: Raskin & Terry, 1988) is a widely used 40-item self-report scale that measures 7 factors of Narcissism roughly mapping onto the DSM-III criteria for Narcissistic Personality Disorder. Participants indicated which of two written descriptions best described them for each of the 40 items. An overall NPI score was calculated by giving one point for each item marked in the Narcissism scaled direction and summing across all 40 items. The average NPI score in this sample was 16.23 ( $SD = 6.64$ ) on a 0-40 scale with a minimum score of 2 and a maximum score of 34.

**Riverside Situational Q-Sort.** The Riverside Situational Q-Sort Version 2.0 (RSQ: Sherman et al., 2010a; Wagerman & Funder, 2009), comprises 81 diverse characteristics of situations (e.g., “Talking is permitted, invited, or conventionally expected”; “Context is potentially anxiety-inducing”). During lab sessions 2-5, each participant assessed the situation he or she reported being in at a particular time the day before by placing each item into one of nine categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) according to a forced choice, quasi-normal distribution, using the Q-sorting computer program. The number of items placed in each category was 3, 6, 10, 14, 15, 14, 10, 6, and 3 for categories 1-9 respectively. Thus, as is typical of the Q-Sort method, participants are forced to decide which few items are the most and least characteristic of the situation while the majority of less relevant, or even irrelevant, items are left to the middle categories.

Independent Ratings. Because one aim of this study was to gather actual situations experienced by participants, it was not possible to view the participants' situations directly. However, we sought independent ratings that could help provide a window into the ways that others might view situations differently than did the participants themselves. As will be recalled, during sessions 2-5 participants began by describing where they were at a specified time the previous day on a 3x5 card. Of course, these descriptions are, in a sense, already filtered through the participants' point of view. However, nearly all are in fact quite straightforward descriptions of objective aspects of situations (e.g., "I was just finishing my midterm for Psych 1," "Making dinner for me and my boyfriend"; see Sherman et al., 2010a, Table 1 or Table 2-1 for more examples) that still leave room for differences in subjective response.

Four research assistants, from a total pool of 22, independently read and rated each situation using the RSQ. As a means of quality control (and similar to practice with the RBQ: Funder, Furr & Colvin, 2000; Furr, Wagerman & Funder, 2010), the four ratings for each situation were examined for profile agreement and retained if the average agreement exceeded  $r = .23$ , which is an empirical estimate of the profile agreement between two randomly paired situations. For approximately 50 situations, from the 814 total, a rating with low agreement was dropped and an additional rating was completed. The four ratings were then averaged to form a composite, consensual rating of the psychological properties of each situation. The average profile agreement amongst raters of the same situation is  $r = .49$  ( $SD = .08$ ), yielding an average alpha for the rater composites of  $.79$  ( $SD = .06$ ).

### *Quantifying Construal*

These aforementioned methods yielded, for each situation experienced by participants, both a self-view of the psychological properties of that situation and a consensual view of the psychological properties of that situation. Theoretically, the self-view of a single situation is made up of two components: a) the objective psychological properties of that situation and b) the participant's subjective view, or unique construal, of the psychological properties of that situation. In addition, the composite, consensual views of a single situation experienced by a participant is theoretically composed of only the objective psychological properties—or in Murray's (1938) terms alpha press—of that situation as each independent rater's own subjective construals or perceptual biases tend to cancel each others' out. To separate the two components that make up the self-view of situations, the objective situational properties provided by the composite of independent ratings were used to predict self-reports of situational properties. In a linear regression conceptualization, the portion of the self-ratings that fit the consensual ratings represent the degree to which the participants saw the situations as they actually were, whereas the portion of the self-ratings that did not fit the consensual ratings (i.e. the residuals) represent the degree to which participants construed the situations uniquely.

To achieve this result in these data, a standardized linear regression predicting the 81 RSQ self-report scores from the 81 RSQ consensual view scores for each situation, for each participant, was computed and the residuals from these regressions were retained. This resulted in 81 residual scores for each situation provided by each participant which represent the degree to which that participant uniquely construed the psychological

properties of that situation as different from the consensual view.<sup>36</sup> These unique construals are used in the subsequent analyses (the descriptive statistics for these unique construals for each time point appear in Appendix C).

## Results

### *Situation Content*

A previous publication using this data set provided a detailed description of the kinds of situations participants in this study reported experiencing (see Sherman et al., 2010a, Table 1 or Table 2-1). Briefly, these situations included a wide range of typical settings of normal undergraduate student life, such as “playing games at a friend’s apartment,” “taking a midterm” and “making dinner for me and my boyfriend.” An exploratory inverse factor analysis using an oblique rotation identified 7 clusters (or types) of situations: I–Social Situations (roughly making up 36% of all situations), II–School Work in Class with Others (19%), III–School Work at Home or Alone (14%), IV–Recreating (13%), V–Getting Ready for Something (11%), VI–Work (4%), and VII–Unpleasant Situations (3%). While these results illustrate the diversity of situations participants in our sample experienced, it would be highly premature to regard them as a comprehensive or general model for the structure of situations (Sherman et al., 2010a).

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<sup>36</sup> This analysis to obtain the residuals was conducted, as described, as a within-subject (profile) analysis. However, the analysis could also be conducted one item (rather than one subject) at a time. Because we believe it makes more conceptual sense to treat each situation independently rather than to create residuals based on differences between situations, the within-subject type of analysis was conducted here. However, it should be noted that while both types of possible analyses are theoretically independent their results were nearly identical. When an item-level analysis was used to create the residuals, the two methods created sets of residuals that correlated on average with  $r > .97$  across the 81 items and on average with  $r > .93$  across the situation profiles.

### *Are Unique Perceptions of Situations Related to Personality?*

To examine the relationship between personality and unique perceptions of situations in a broad scope, the 100 items of the CAQ were correlated with the 81 RSQ residual scores separately for each of the four visits participants completed. This resulted in a 100x81 correlation matrix for each of the four visits, each with some number of statistically significant correlates (at the  $p < .05$  level). Following the procedure outlined by Sherman and Funder (2009), a randomization test was conducted on each of these four matrixes to determine the probability of the observed number of statistically significant correlates and the average absolute  $r$  of each matrix. The results of this analysis are displayed in Table 4-1.

Table 4-1.  
Results from Randomization Tests Correlating 100 CAQ Items with 81 Unique RSQ Perceptions

| Visit | N   | # Significant | $p$  | Avg. $ r $ | $p$   |
|-------|-----|---------------|------|------------|-------|
| 2     | 205 | 479           | .005 | .0587      | <.001 |
| 3     | 203 | 502           | .001 | .0589      | .001  |
| 4     | 203 | 483           | .003 | .0587      | .002  |
| 5     | 203 | 477           | .004 | .0585      | .001  |

Note. # Significant is the observed number of statistically significant correlations in the 100x81 correlation matrix followed by the  $p$ -value associated with such a number. Avg.  $|r|$  is the average absolute  $r$  in the 100x81 correlation matrix followed by its associated  $p$ -value.

As Table 4-1 shows, for each of the four visits completed by participants the number of statistically significant correlations between personality traits and unique construals of situations, as well as the average absolute  $r$  between traits and unique construals of situations, is higher than expected by chance alone. This suggests that there are many meaningful relationships between personality and unique perceptions of situations. We now turn to some of these more specific relationships.

### *How does Personality Relate to Unique Perceptions of Situations?*

While the previous analysis suggests that personality in general is related to unique perceptions of situations, it is important to identify ways in which specific personality traits are related to perceptions of situations. As noted in the Measures section, nine scale-scored personality variables were measured in this study. These nine scale-scored measures of personality were correlated with the previously described 81 residual situation reports representing a participant's unique perception of his or her situation. However, upon completion of this analysis it was apparent that two pairs of correlation tables were highly overlapping with each. Therefore, the two measures of well-being (Subjective Happiness and Psychological Well-Being,  $r = .56$ ) were z-scored and averaged to form a composite Well-Being variable ( $M = .00$ ,  $SD = .88$ ). This is consistent with previous literature indicating that both hedonic and eudaimonic measures of well-being are highly related (Kashdan, Biswas-Diener, & King, 2008; Nave, Sherman, & Funder, 2008). In addition, two measures of negative affectivity (Neuroticism and Beck Depression Inventory,  $r = .55$ ) also produced highly overlapping tables of unique perceptions therefore they were z-scored and averaged to form a composite Negative Trait Affect measure ( $M = .00$ ,  $SD = .87$ ).

Table 4-2 presents the meta-analytically combined correlations between the aforementioned Well-Being construct and unique perceptions of situations both for the total sample and split by gender.<sup>37</sup>

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<sup>37</sup> Because most participants completed four visits, each correlation in the tables presented hereafter is a meta-analytically combined correlation between the measured personality trait and the unique perceptions of each of the four situations. The traditional meta-analytic procedures for a random effects analysis were used for computing the effect sizes and their *p*-values were determined via randomization test. In addition, all Tables are abbreviated to only include those correlations which were statistically significant at  $p < .10$  for the total sample or at  $p < .05$  for either the male or female samples.

Table 4-2.

## RSQ Construal Correlates with Well-Being Composite using Within-Person Residuals

| ## - RSQ Item                                    | Combined | Males  | Females |
|--|----------|--------|---------|
| <i>Positive Correlates</i>                       |          |        |         |
| 52 - P is focus of attention                     | .15***   | .22*** | .06     |
| 62 - Allows expression of ambition               | .12**    | .15**  | .09+    |
| 54 - Relevant to P's health                      | .11**    | .13*   | .09+    |
| 47 - Includes intellectual stimuli               | .11**    | .19*** | .03     |
| 53 - Includes sensuous stimuli                   | .11**    | .05    | .14**   |
| 09 - Potentially enjoyable                       | .09*     | -.07   | .20***  |
| 81 - P is complimented/praised                   | .08*     | .13*   | .04     |
| 56 - P controls resources                        | .08*     | .06    | .08+    |
| 48 - Assertiveness required                      | .07*     | .11*   | .02     |
| 80 - Success requires cooperation                | .07*     | .07    | .05     |
| 59 - Includes aesthetic stimuli                  | .06+     | .17*** | -.03    |
| 28 - Physical attractiveness salient             | .06+     | .04    | .11*    |
| 51 - Is or potentially is humorous               | .06+     | .06    | .07     |
| 43 - Allows for daydreaming/rumination           | .06+     | .01    | .10*    |
| 39 - Calls for quick resolution                  | .05      | -.07   | .14**   |
| <i>Negative Correlates</i>                       |          |        |         |
| 12 - Is being insulted                           | -.12***  | -.12*  | -.12*   |
| 25 - Allows for liking or acceptance             | -.10**   | -.10+  | -.10*   |
| 66 - Can arouse feelings of self-pity            | -.10**   | -.06   | -.14**  |
| 01 - Trying to impress/convince                  | -.09**   | -.10+  | -.10*   |
| 29 - Pos. or Neg. impression possible            | -.09*    | -.10*  | -.08+   |
| 20 - Potential for blame                         | -.09**   | -.02   | -.12*   |
| 31 - Small frustrations/annoyances               | -.08*    | -.11*  | -.06    |
| 11 - Is being criticized                         | -.07*    | -.04   | -.10+   |
| 27 - Frustrating or adverse                      | -.07*    | .01    | -.14**  |
| 73 - Allows expression of masculinity/femininity | -.07*    | -.02   | -.10*   |
| 69 - Simple/clear-cut                            | -.07+    | -.11*  | -.02    |
| 44 - Can arouse guilt                            | -.06+    | -.01   | -.10+   |
| 03 - Talking permitted/invited/expected          | -.06+    | -.07   | -.05    |
| 58 - Has behavioral limits                       | -.05     | .06    | -.14**  |
| 21 - Allows for rational or irrational decisions | -.04     | -.11*  | .04     |
| 36 - Allows for unusual ideas                    | -.00     | -.10*  | .07     |

Note. RSQ Item content abbreviated. \*\*\* =  $p < .001$ , \*\* =  $p < .01$ , \* =  $p < .05$ , + =  $p < .10$ . Male-Female Vector correlation,  $r = .26$ . Correlations are the meta-analytic results from four correlations between self-reported RSQ item residuals (controlling for independent ratings) from four situations experienced by participants in daily life and self-reported Well-Being Construct.  $p$ -values determined via randomization test. Ns for each of the four correlations contributing to the meta-analytic results were 204, 202, 202, and 202.



As this table shows, people who are high on well-being tend to perceive their situations as more positive and less negative compared to persons who are low on well-being, such that people high on well-being tend to see their situations as ones in which their ambition can be displayed, that are relevant to their health, and potentially enjoyable (females). In addition, people high on well-being do not uniquely perceive themselves as being in situations where they are being insulted, being criticized, or being blamed for something. One interesting item listed in Table 4-2 is item 25, “Allows for liking or acceptance.” One might wonder why people who are high in well-being tend to perceive their situations as relatively low, compared to third party raters, in allowing for liking or acceptance. The reason for this is because people high in well-being tend to actually be in situations that allow for liking or acceptance ( $r = .10$ ) according to third party raters. Thus, to those people high in well-being it is likely that they do not uniquely perceive themselves as being in such situations because they have a tendency to be in them more often.

Table 4-3 presents the meta-analytically combined correlations between the aforementioned Negative Trait Affect construct and unique perceptions of situations both for the total sample and split by gender.

Table 4-3.

RSQ Construal Correlates with Negative Trait Affect Composite using Within-Person Residuals

| <u>## - RSQ Item</u>                      | <u>Combined</u> | <u>Males</u> | <u>Females</u> |
|---|-----------------|--------------|----------------|
| <u>Positive Correlates</u>                |                 |              |                |
| 11 - Is being criticized                  | .15***          | .15**        | .17***         |
| 12 - Is being insulted                    | .15***          | .18***       | .15***         |
| 27 - Frustrating or adverse               | .10**           | .06          | .15**          |
| 66 - Can arouse feelings of self-pity     | .10**           | .02          | .15**          |
| 19 - Needs support of others              | .08*            | .09+         | .03            |
| 41 - Others have hidden motives           | .08*            | .08          | .08            |
| 18 - Pace is slow or fast                 | .08*            | .11*         | .04            |
| 16 - One is unhappy/suffering             | .08*            | .03          | .12*           |
| 58 - Has behavioral limits                | .07*            | -.01         | .14**          |
| 60 - Potentially anxiety-inducing         | .07*            | .09+         | .07            |
| 01 - Trying to impress/convince           | .06+            | .07          | .05            |
| 06 - Evokes lifestyle/political values    | .06+            | .02          | .07            |
| 33 - Potential undermining/sabotage       | .05             | -.04         | .16**          |
| 20 - Potential for blame                  | .01             | -.02         | .10*           |
| <u>Negative Correlates</u>                |                 |              |                |
| 74 - Advice needed/requested              | -.12***         | -.04         | -.19***        |
| 52 - P is focus of attention              | -.11**          | -.21***      | -.08           |
| 81 - P is complimented/praised            | -.10**          | -.21***      | -.02           |
| 56 - P controls resources                 | -.10**          | -.10*        | -.12*          |
| 51 - Is or potentially is humorous        | -.10**          | -.14**       | -.05           |
| 54 - Relevant to P's health               | -.10**          | -.14**       | -.08           |
| 28 - Physical attractiveness salient      | -.09*           | -.06         | -.07           |
| 62 - Allows expression of ambition        | -.07*           | -.04         | -.11*          |
| 57 - Has wide range of interpersonal cues | -.07*           | -.02         | -.11*          |
| 39 - Calls for quick resolution           | -.07+           | .02          | -.15**         |
| 14 - Playful                              | -.07+           | -.07         | -.06           |
| 46 - Trust vs. Mistrust issues raised     | -.07+           | .04          | -.13**         |
| 38 - Raises moral/ethical concerns        | -.06+           | -.07         | -.09+          |
| 70 - Allows expression of charm           | -.06+           | -.07         | -.04           |
| 09 - Potentially enjoyable                | -.06            | .03          | -.14**         |
| 59 - Includes aesthetic stimuli           | -.05            | -.18***      | .05            |
| 36 - Allows for unusual ideas             | -.02            | .03          | -.10*          |

Note. RSQ Item content abbreviated. \*\*\* =  $p < .001$ , \*\* =  $p < .01$ , \* =  $p < .05$ , + =  $p < .10$ . Male-Female Vector correlation,  $r = .34$ . Correlations are the meta-analytic results from four correlations between self-reported RSQ item residuals (controlling for independent ratings) from four situations experienced by participants in daily life and self-reported BFI Neuroticism and Beck Depression Inventory composite.  $p$ -values determined via randomization test. Ns for each of the four correlations contributing to the meta-analytic results were 205, 203, 203, and 203.

As Table 4-3 shows, people who are high in Negative Trait Affectivity (i.e. Neuroticism and Depression) tend to uniquely view their situations as quite negative. Specifically people who are high on this dimension see their situations as “Frustrating and adverse” as well as ones in which they are being insulted and criticized compared to people who are low on this dimension. In addition, people high in Negative Trait Affectivity do not perceive themselves as being the center of attention, do not think they are being complimented or praised, and do not believe they have control of their situations in general.

Table 4-4 presents the meta-analytically combined correlations between Agreeableness and unique perceptions of situations for the total sample and split by gender.

Table 4-4.

## RSQ Construal Correlates with Agreeableness using Within-Person Residuals

| ## - RSQ Item                                    | Combined | Males  | Females |
|--|----------|--------|---------|
| <i>Positive Correlates</i>                       |          |        |         |
| 81 - P is complimented/praised                   | .11**    | .10*   | .12*    |
| 55 - Requires self-insight for success           | .11**    | .13*   | .09+    |
| 72 - Raises power issues                         | .10**    | .05    | .12*    |
| 80 - Success requires cooperation                | .10**    | .07    | .08+    |
| 52 - P is focus of attention                     | .09*     | .12*   | -.01    |
| 65 - Demands shift rapidly                       | .09*     | .08+   | .13**   |
| 76 - Can be emotionally arousing                 | .08*     | -.02   | .16**   |
| 48 - Assertiveness required                      | .08*     | .04    | .07     |
| 19 - Needs support of others                     | .08*     | .05    | .05     |
| 56 - P controls resources                        | .07*     | .07    | .06     |
| 74 - Advice needed/requested                     | .07+     | .05    | .10*    |
| 41 - Others have hidden motives                  | .07+     | .12*   | .03     |
| 53 - Includes sensuous stimuli                   | .02      | -.08   | .10*    |
| <i>Negative Correlates</i>                       |          |        |         |
| 22 - Self-restraint desired but difficult        | -.11**   | -.08   | -.12*   |
| 69 - Simple/clear-cut                            | -.10**   | -.13*  | -.07    |
| 12 - Is being insulted                           | -.09*    | -.10*  | -.07    |
| 51 - Is or potentially is humorous               | -.09*    | -.07   | -.08    |
| 21 - Allows for rational or irrational decisions | -.08*    | -.09+  | -.04    |
| 35 - Can cause hostility                         | -.08*    | -.06   | -.03    |
| 37 - Potentially threatening                     | -.07+    | -.10+  | .03     |
| 33 - Potential undermining/sabotage              | -.07+    | -.05   | -.05    |
| 25 - Allows for liking or acceptance             | -.07+    | -.09+  | -.02    |
| 61 - Includes demands                            | -.07+    | -.03   | -.06    |
| 43 - Allows for daydreaming/rumination           | -.06+    | -.11*  | -.03    |
| 79 - P is pressured to conform                   | .06+     | .07    | .05     |
| 78 - Others occupy various social roles          | .06+     | .05    | .06     |
| 10 - Another is under threat                     | -.06+    | -.04   | -.02    |
| 11 - Is being criticized                         | -.06+    | .03    | -.14**  |
| 49 - Allows for immediate gratification          | -.04     | -.13** | .06     |
| 54 - Relevant to P's health                      | -.04     | -.11*  | .03     |
| 06 - Evokes lifestyle/political values           | -.03     | .00    | -.12*   |
| 27 - Frustrating or adverse                      | -.01     | .09+   | -.10*   |

Note. RSQ Item content abbreviated. \*\*\* =  $p < .001$ , \*\* =  $p < .01$ , \* =  $p < .05$ , + =  $p < .10$ . Male-Female Vector correlation,  $r = .19$ . Correlations are the meta-analytic results from four correlations between self-reported RSQ item residuals (controlling for independent ratings) from four situations experienced by participants in daily life and self-reported Agreeableness.  $p$ -values determined via randomization test.  $N$ s for each of the four correlations contributing to the meta-analytic results were 205, 203, 203, and 203.

As this table shows, people high on Agreeableness tend to perceive themselves as being in situations where they are complimented and praised, that require self-insight for success, and they do not believe that “Self-restraint is desired but difficult” compared to those who are low on Agreeableness. Consistent with the hypotheses regarding Agreeableness, people high on Agreeableness also tend to uniquely view their situations as requiring more cooperation than those who are low on Agreeableness.

Of all of the traits examined, Conscientiousness (Table 4-5) has the most statistically significant correlations with unique perceptions of situations.

Table 4-5.

RSQ Construal Correlates with Conscientiousness using Within-Person Residuals

| <u>## - RSQ Item</u>                              | <u>Combined</u> | <u>Males</u> | <u>Females</u> |
|---|-----------------|--------------|----------------|
| <i>Positive Correlates</i>                        |                 |              |                |
| 48 - Assertiveness required                       | .16***          | .20***       | .08+           |
| 52 - P is focus of attention                      | .14***          | .14**        | .12*           |
| 55 - Requires self-insight for success            | .14***          | .19***       | .09+           |
| 80 - Success requires cooperation                 | .14***          | .15**        | .10+           |
| 54 - Relevant to P's health                       | .11**           | .01          | .21***         |
| 56 - P controls resources                         | .10**           | .09+         | .10*           |
| 36 - Allows for unusual ideas                     | .10**           | .10*         | .07            |
| 81 - P is complimented/praised                    | .09**           | .11*         | .09+           |
| 72 - Raises power issues                          | .09**           | .10*         | .06            |
| 70 - Allows expression of charm                   | .09*            | .03          | .16**          |
| 24 - Involves competition                         | .08*            | .07          | .11*           |
| 53 - Includes sensuous stimuli                    | .08*            | -.03         | .17***         |
| 47 - Includes intellectual stimuli                | .07*            | -.02         | .14**          |
| 65 - Demands shift rapidly                        | .06+            | .10+         | .06            |
| 23 - Job needs to be done                         | .06+            | .13*         | .02            |
| 76 - Can be emotionally arousing                  | .06+            | -.00         | .10+           |
| 79 - P is pressured to conform                    | .06             | .11*         | -.00           |
| 75 - P's independence questioned                  | .06             | -.01         | .11*           |
| 05 - Minor details important                      | .03             | .10*         | -.06           |
| 50 - Social interaction possible                  | .03             | -.08         | .14**          |
| 09 - Potentially enjoyable                        | .02             | -.10*        | .11*           |
| <i>Negative Correlates</i>                        |                 |              |                |
| 12 - Is being insulted                            | -.14***         | -.15**       | -.13*          |
| 11 - Is being criticized                          | -.12***         | -.03         | -.20***        |
| 15 - Allows for introspection                     | -.09*           | -.12*        | -.07           |
| 29 - Pos. or Neg. impression possible             | -.09*           | -.12*        | -.04           |
| 16 - One is unhappy/suffering                     | -.09*           | .04          | -.21***        |
| 44 - Can arouse guilt                             | -.08*           | .00          | -.15**         |
| 01 - Trying to impress/convince                   | -.08*           | -.06         | -.12*          |
| 22 - Self-restraint desired but difficult         | -.08*           | -.09+        | -.04           |
| 20 - Potential for blame                          | -.08*           | .06          | -.14**         |
| 49 - Allows for immediate gratification           | -.07*           | -.12*        | -.02           |
| 31 - Small frustrations/annoyances                | -.07*           | .02          | -.15**         |
| 66 - Can arouse feelings of self-pity             | -.07+           | .01          | -.14**         |
| 69 - Simple/clear-cut                             | -.07+           | -.10*        | -.03           |
| 25 - Allows for liking or acceptance              | -.06+           | -.08+        | -.03           |
| 21 - Allows for rational or irrational decisions  | -.06+           | -.07         | -.03           |
| 35 - Can cause hostility                          | -.06+           | -.07         | -.00           |
| 45 - Close relationships present or could develop | -.05            | -.12*        | -.00           |
| 68 - Can arouse internal conflicts                | -.00            | .09+         | -.10*          |

Note. RSQ Item content abbreviated. \*\*\* =  $p < .001$ , \*\* =  $p < .01$ , \* =  $p < .05$ , + =  $p < .10$ . Male-Female Vector correlation,  $r = .20$ . Correlations are the meta-analytic results from four correlations between self-reported RSQ item residuals (controlling for independent ratings) from four situations experienced by participants in daily life and self-reported Conscientiousness.  $p$ -values determined via randomization test.  $N$ s for each of the four correlations contributing to the meta-analytic results were 205, 203, 203, and 203.

Persons high on conscientiousness tend to see their situations as ones in which “Assertiveness is required,” where success requires self-insight, and relevant to their health (females only). In addition, conscientious people tend to uniquely perceive their situations as ones in which they are not being insulted or criticized. Overall, it appears that conscientious individuals tend to uniquely view situations as more focused around success and work than do people who are less conscientious.

In terms of Extraversion (Table 4-6) the patterns of correlations between this trait and unique perceptions of situations are distinct for males and females.

Table 4-6.

## RSQ Construal Correlates with Extraversion using Within-Person Residuals

| ## - RSQ Item                                    | Combined | Males   | Females |
|--|----------|---------|---------|
| <i>Positive Correlates</i>                       |          |         |         |
| 52 - P is focus of attention                     | .15***   | .20***  | .11*    |
| 17 - Allows for seeking reassurance              | .10**    | .08     | .13**   |
| 30 - Possible tension                            | .09*     | .14**   | .05     |
| 64 - Allows for sexual construal of stimuli      | .08*     | .03     | .13*    |
| 02 - Counted on to do something                  | .07*     | .07     | .07     |
| 11 - Is being criticized                         | .06+     | -.02    | .14**   |
| 07 - Can demonstrate intellectual capacity       | .06+     | .07     | .05     |
| 28 - Physical attractiveness salient             | .06      | .12*    | -.01    |
| 19 - Needs support of others                     | .05      | .11*    | .02     |
| 40 - Allows for emotional expression             | .04      | -.04    | .12*    |
| 67 - Opposite sex is present                     | .04      | .11*    | -.04    |
| 72 - Raises power issues                         | .00      | .12*    | -.11*   |
| <i>Negative Correlates</i>                       |          |         |         |
| 68 - Can arouse internal conflicts               | -.15***  | -.11*   | -.18*** |
| 69 - Simple/clear-cut                            | -.08*    | -.08    | -.09+   |
| 78 - Others occupy various social roles          | -.08*    | -.00    | -.14**  |
| 73 - Allows expression of masculinity/femininity | -.07*    | -.03    | -.13**  |
| 41 - Others have hidden motives                  | -.07*    | -.10*   | -.04    |
| 65 - Demands shift rapidly                       | -.07+    | -.04    | -.10+   |
| 05 - Minor details important                     | -.07+    | -.01    | -.12*   |
| 18 - Pace is slow or fast                        | -.06+    | -.04    | -.08+   |
| 39 - Calls for quick resolution                  | -.06+    | -.15**  | .02     |
| 42 - Could entail stress or trauma               | -.06+    | -.09+   | -.04    |
| 21 - Allows for rational or irrational decisions | -.05     | -.18*** | .06     |
| 29 - Pos. or Neg. impression possible            | -.04     | -.12*   | .02     |
| 66 - Can arouse feelings of self-pity            | -.04     | .03     | -.10*   |
| 31 - Small frustrations/annoyances               | -.03     | -.18*** | .09+    |

Note. RSQ Item content abbreviated. \*\*\* =  $p < .001$ , \*\* =  $p < .01$ , \* =  $p < .05$ , + =  $p < .10$ . Male-Female Vector correlation,  $r = .00$ . Correlations are the meta-analytic results from four correlations between self-reported RSQ item residuals (controlling for independent ratings) from four situations experienced by participants in daily life and self-reported Extraversion.  $p$ -values determined via randomization test. Ns for each of the four correlations contributing to the meta-analytic results were 204, 202, 202, and 202.



While both males and females high in Extraversion tend to uniquely perceive their situations as ones in which they are the center of attention, males also perceive their situations to be characterized by “possible tension,” their own physical attractiveness being salient, members of the opposite sex being present, and raising power issues. Meanwhile, females high in Extraversion tend to perceive their situation as allowing for sexual construal of stimuli, allowing for emotional expression, and not raising power issues. On the other hand, introverted males tend to uniquely perceive their situations as characterized by the items, “Calls for quick resolution,” “Positive or negative impression possible,” and “Small frustrations or annoyances” whereas introverted females tend to believe their situations “Can arouse internal conflicts,” include “Minor details,” and “Arouse feelings of self-pity.”

Table 4-7 displays the meta-analytically combined correlations between Openness and unique perceptions of situations.

Table 4-7.

## RSQ Construal Correlates with Openness using Within-Person Residuals

| ## - RSQ Item                              | Combined | Males  | Females |
|--|----------|--------|---------|
| <i>Positive Correlates</i>                 |          |        |         |
| 59 - Includes aesthetic stimuli            | .13***   | .11*   | .15**   |
| 47 - Includes intellectual stimuli         | .12**    | .12*   | .13**   |
| 54 - Relevant to P's health                | .09*     | .08    | .12*    |
| 07 - Can demonstrate intellectual capacity | .08*     | .08    | .08+    |
| 06 - Evokes lifestyle/political values     | .08*     | .03    | .14**   |
| 63 - Raises issues of personal adequacy    | .08*     | -.01   | .16**   |
| 72 - Raises power issues                   | .07*     | .13**  | .02     |
| 22 - Self-restraint desired but difficult  | .06+     | .04    | .08     |
| 09 - Potentially enjoyable                 | .06+     | -.04   | .16**   |
| 52 - P is focus of attention               | .05      | .17**  | -.06    |
| <i>Negative Correlates</i>                 |          |        |         |
| 50 - Social interaction possible           | -.12***  | -.08   | -.17*** |
| 26 - Others need/desire advice/reassurance | -.09*    | -.05   | -.13**  |
| 03 - Talking permitted/invited/expected    | -.09*    | -.05   | -.13**  |
| 71 - Allows for social comparison          | -.08*    | -.05   | -.12*   |
| 78 - Others occupy various social roles    | -.08*    | -.09+  | -.06    |
| 25 - Allows for liking or acceptance       | -.07*    | -.06   | -.09+   |
| 69 - Simple/clear-cut                      | -.06+    | -.07   | -.06    |
| 80 - Success requires cooperation          | -.06+    | -.08   | -.03    |
| 12 - Is being insulted                     | -.06+    | -.17** | .04     |
| 42 - Could entail stress or trauma         | -.06+    | -.11*  | -.01    |
| 74 - Advice needed/requested               | -.05     | .02    | -.13**  |
| 27 - Frustrating or adverse                | -.04     | -.11*  | .03     |
| 10 - Another is under threat               | -.02     | -.14** | .07     |
| 62 - Allows expression of ambition         | -.02     | .07    | -.11*   |

Note. RSQ Item content abbreviated. \*\*\* =  $p < .001$ , \*\* =  $p < .01$ , \* =  $p < .05$ , + =  $p < .10$ . Male-Female Vector correlation,  $r = .10$ . Correlations are the meta-analytic results from four correlations between self-reported RSQ item residuals (controlling for independent ratings) from four situations experienced by participants in daily life and self-reported Openness.  $p$ -values determined via randomization test. Ns for each of the four correlations contributing to the meta-analytic results were 203, 201, 201, and 201.

Consistent with the conceptualization of Openness, people high on Openness tend to uniquely perceive their situations as including both aesthetic and intellectual stimuli as well as evoking lifestyle or political values as compared to those low on Openness. In addition, the relationship between Openness and unique perceptions of situations is relatively distinct for males and females such that males who are high on Openness tend to perceive that they are the center of attention, that they are not being insulted, and that others are not under threat compared to males low on Openness. While females who are high on Openness tend to view their situations as raising issues of personal adequacy, being more potentially enjoyable, and less likely to require advice than females who are low on Openness.

Table 4-8 displays the meta-analytically combined correlations between Narcissism and unique perceptions of situations.

Table 4-8.

## RSQ Construal Correlates with Narcissism using Within-Person Residuals

| ## - RSQ Item                                     | Combined | Males  | Females |
|---|----------|--------|---------|
| <i>Positive Correlates</i>                        |          |        |         |
| 52 - P is focus of attention                      | .15***   | .23*** | .10+    |
| 17 - Allows for seeking reassurance               | .10**    | .09+   | .12*    |
| 45 - Close relationships present or could develop | .09*     | .13*   | .05     |
| 07 - Can demonstrate intellectual capacity        | .09*     | .11*   | .07     |
| 64 - Allows for sexual construal of stimuli       | .09*     | .06    | .12*    |
| 30 - Possible tension                             | .08*     | .09    | .10+    |
| 48 - Assertiveness required                       | .08*     | .13*   | .06     |
| 70 - Allows expression of charm                   | .08*     | .14**  | -.02    |
| 37 - Potentially threatening                      | .07+     | .05    | .06     |
| 47 - Includes intellectual stimuli                | .07+     | .13*   | .02     |
| 72 - Raises power issues                          | .07+     | .17**  | -.04    |
| 13 - One might dominate                           | .07+     | .06    | .08     |
| 22 - Self-restraint desired but difficult         | .06      | -.00   | .12*    |
| 19 - Needs support of others                      | .06      | .19*** | -.05    |
| 54 - Relevant to P's health                       | .06      | .15*   | -.05    |
| 44 - Can arouse guilt                             | .05      | -.03   | .12*    |
| 38 - Raises moral/ethical concerns                | .04      | .01    | .11*    |
| 06 - Evokes lifestyle/political values            | .02      | -.04   | .13*    |
| 76 - Can be emotionally arousing                  | .01      | -.06   | .13*    |
| <i>Negative Correlates</i>                        |          |        |         |
| 41 - Others have hidden motives                   | -.11**   | -.16** | -.06    |
| 18 - Pace is slow or fast                         | -.10**   | -.11*  | -.08    |
| 69 - Simple/clear-cut                             | -.10**   | -.11*  | -.10+   |
| 71 - Allows for social comparison                 | -.09**   | -.08   | -.12*   |
| 12 - Is being insulted                            | -.09**   | -.16** | -.04    |
| 34 - Allows honestly or deceit                    | -.09*    | -.17** | .00     |
| 78 - Others occupy various social roles           | -.08*    | -.07   | -.08    |
| 29 - Pos. or Neg. impression possible             | -.08*    | -.15** | -.01    |
| 05 - Minor details important                      | -.08*    | -.02   | -.13*   |
| 39 - Calls for quick resolution                   | -.07+    | -.07   | -.07    |
| 50 - Social interaction possible                  | -.07+    | -.09+  | -.04    |
| 79 - P is pressured to conform                    | -.06+    | -.06   | -.07    |
| 26 - Others need/desire advice/reassurance        | -.06+    | -.03   | -.11*   |
| 27 - Frustrating or adverse                       | -.06     | -.13*  | .01     |
| 10 - Another is under threat                      | -.04     | -.12*  | .01     |
| 40 - Allows for emotional expression              | -.00     | -.08   | .10*    |

Note. RSQ Item content abbreviated. \*\*\* =  $p < .001$ , \*\* =  $p < .01$ , \* =  $p < .05$ , + =  $p < .10$ . Male-Female Vector correlation,  $r = .12$ . Correlations are the meta-analytic results from four correlations between self-reported RSQ item residuals (controlling for independent ratings) from four situations experienced by participants in daily life and self-reported Narcissism.  $p$ -values determined via randomization test. Ns for each of the four correlations contributing to the meta-analytic results were 191, 189, 189, and 189.

Consistent with the theoretical underpinnings of Narcissism (Raskin & Terry, 1988) males who are high on Narcissism tend to uniquely view their situations as ones in which they are the focus of attention, they can demonstrate their intellectual capacity, and express their charm. Females who are high on Narcissism, on the other hand, tend to uniquely construe their situations as ones in which they are also the focus of attention, but also as allowing for sexual construal of stimuli, requiring self-restraint, and more emotionally arousing.

As noted throughout the results so far, and by use of the Inter Ocular Trauma Test (Berkson, n.d. as cited in Savage, 2009), gender appears to have played an important moderating role between personality and unique perceptions of situations. Thus, it makes sense to examine whether males and females have a tendency to uniquely perceive their situations differently from one another. Indeed, Table 4-9 displays a number of situational characteristics which males and females tend to view distinctly from one another as compared to a group of third party—mixed gender—raters.

Table 4-9.

## RSQ Construal Correlates with Gender (F=1, M=2) using Within-Person Residuals

| ## - RSQ Item                                    | <i>r</i> |
|--|----------|
| <i>Males Perceive Higher</i>                     |          |
| 20 - Potential for blame                         | .18***   |
| 10 - Another is under threat                     | .14***   |
| 35 - Can cause hostility                         | .14***   |
| 37 - Potentially threatening                     | .13***   |
| 28 - Physical attractiveness salient             | .13***   |
| 61 - Includes demands                            | .10**    |
| 73 - Allows expression of masculinity/femininity | .10**    |
| 33 - Potential undermining/sabotage              | .08*     |
| 21 - Allows for rational or irrational decisions | .08*     |
| 64 - Allows for sexual construal of stimuli      | .06+     |
| 46 - Trust vs. Mistrust issues raised            | .06+     |
| 22 - Self-restraint desired but difficult        | .06+     |
| <i>Females Perceive Higher</i>                   |          |
| 19 - Needs support of others                     | -.13***  |
| 48 - Assertiveness required                      | -.12***  |
| 32 - Evokes warmth/compassion                    | -.12***  |
| 52 - P is focus of attention                     | -.11**   |
| 06 - Evokes lifestyle/political values           | -.10**   |
| 40 - Allows for emotional expression             | -.10**   |
| 36 - Allows for unusual ideas                    | -.10**   |
| 76 - Can be emotionally arousing                 | -.09**   |
| 80 - Success requires cooperation                | -.08*    |
| 72 - Raises power issues                         | -.07+    |
| 47 - Includes intellectual stimuli               | -.07+    |
| 38 - Raises moral/ethical concerns               | -.06+    |
| 53 - Includes sensuous stimuli                   | -.06+    |
| 05 - Minor details important                     | -.06+    |

Note. RSQ Item content abbreviated. \*\*\* =  $p < .001$ , \*\* =  $p < .01$ , \* =  $p < .05$ , + =  $p < .10$ . Correlations are the meta-analytic results from four correlations between self-reported RSQ item residuals (controlling for independent ratings) from four situations experienced by participants in daily life and self-reported Gender.  $p$ -values determined via randomization test. Ns for each of the four correlations contributing to the meta-analytic results were 205, 203, 203, and 203.

Specifically, males tend to perceive that their situations include more “Potential for blame,” “Potential for undermining or sabotage,” others “Under threat,” and generally more hostile than females. Females on the other hand tend to uniquely perceive their situations to be characterized by the items, “Needs support of others,” “Evokes warmth or compassion,” “Allows emotional expression,” and generally more communal in nature than males.

### Discussion

This study demonstrates that how one uniquely perceives situations differs depending on the specific traits one has. People who are high in well-being tend to view situations they encounter in their daily lives as more positive than people who are low on well-being, or high in negative trait affectivity. Agreeable people tend to perceive that they are being complimented or praised more, that cooperation is necessary, and are less likely to feel insulted in their daily lives. Conscientious persons are likely to view their situations as places where tasks need to be completed and where success is important. Extraverts tend to believe that they are center of attention more so than introverts do. Open people tend to see aesthetic beauty, intellectual stimuli, and lifestyle and political concerns where less open people may not. And narcissists tend to see their situations as opportunities to show off and control others more often than less narcissistic persons do. Finally, even males and females tend to view their experienced situations differently from each other such that males are more likely to perceive their situations as involving hostility and sexual opportunities than a normative group of coders saw them while

females are more likely to perceive their situations as opportunities for communal efforts than a normative group of coders saw them.

### *Size of Effects*

While the relationships between personality and unique perceptions of situations displayed in the Tables and just described are relatively small compared to other effect sizes in personality and social psychological research, it should be noted that these effect sizes are expected. Because people tend to be accurate perceivers of their social worlds (Funder, 1999; Kenny, 1994) it makes sense that little room is left for personal biases (i.e. unique perceptions) to be related to personality. However, one would be greatly misguided to assume the relative effect sizes of the relationship between personality and unique perceptions of situations mean that this relationship is unimportant. When considering the importance of any effect size, it is imperative that one consider the context in which the effect occurs. In this case, it is important to recognize that the relationship between personality and unique perceptions of situations seen here, which tends to hover around  $r = .10$ , is for single situations. In light of the fact that people face many different situations each day, the accumulation of personality's effect on unique perceptions is likely quite large. Indeed, in this data set, participants' unique perceptions of situations demonstrated some consistency across their four situations (mean average inter-correlation across 81 RSQ items  $r = .16$ , mean reliability across 81 RSQ items  $\alpha = .42$ ). This fact implies two things. First, it indicates that people have reliable biases, or construals, of the situations they encounter on a daily basis even only as few as four situations. Second, this indicates that the effects displayed in Tables 4-2 through 4-9 are



much larger when aggregated over the course of many situations. Thus, while the relationship between personality and unique perceptions of situations may be relatively small for a single situation, over the course of days, months, years, and lifetimes, the cumulative effects may be quite large. And of course, lay experience suggests that this makes sense. In our everyday lives, people are not constantly entrenched in disagreements about their social worlds, but subtle differences in perception are apparent and consistent over time.

#### *Experimental vs. Correlational Design*

The present study made efforts to examine the ways in which people perceive situations they actually experience in their social worlds on a daily basis. This research design is advantageous because it allows us to account for the fact that people may actively seek out particular situations (Ickes, Snyder, & Garcia, 1997), unlike experimental designs which impose sometimes arbitrary situations on participants. However, the correlational design in this study is somewhat limiting because it did not allow us to directly view the situations participants experienced. Instead we relied on the participant's reporting of their situations on 3x5 index cards and consensual third party ratings of the situations described on these cards to provide a window into the actual situations participants experienced. While it is crucially important to demonstrate that the phenomenon described in this study play out in the real world, it will be necessary for future researchers to examine this phenomenon in an experimental context as well.

### *Conclusion*

Fifty year ago, Gordon Allport implied that our own personalities shape the way we view the world in which we live. While previous research has focused on how specific traits such as hostility (Dodge, 1993; Dodge & Frame, 1982) or rejection sensitivity (Downey & Feldman, 1996; Downey, Freitas, Michaelis & Khouri, 1998) are related to perceptions of particular hostile or rejecting situations respectively, this study is the first—to our knowledge—to demonstrate that personality is unequivocally related to the way in which people view the situations they experience on a daily basis. Research in personality science has progressed dramatically in recent years and the agenda for the future of personality science has been outlined (Association for Research in Personality, 2010). Amongst this agenda is a call to better understand the psychological processes that underlie differences in personality. As this research demonstrates, the ways in which people differentially perceive their social worlds is one of the core processes involved in individual differences in personality.

## Chapter 5 – Conclusion

Because each of the preceding chapters includes a discussion/conclusion section that speaks to the conclusions of the specific study described in that chapter, the goal of this chapter is to draw on broader conclusions from this dissertation as a whole. The purpose of the three studies presented here was to put the RSQ to the test of measuring something psychologically useful about situations. Prior to the three studies presented here, the empirical work on the RSQ was largely developmental (Wagerman, 2008; Wagerman & Funder, 2008; 2009) despite making its first appearance in 2006 (Wagerman & Funder, 2006). The three studies presented here move the RSQ beyond being simply an instrument for describing situations by demonstrating that the RSQ is useful—even necessary—for testing theoretically driven hypotheses. In addition, these three studies represent the first peer-reviewed empirical work employing the RSQ.

In addition, because the work presented here represents all of the empirical work to date funded by an NSF grant (Funder, 2007) it makes sense to evaluate the results of such work here. One of the broad goals at the outset of this research project was simply to gather descriptive information about the psychologically relevant characteristics of situations and examine their relationships with personality and behavior (Funder, 2007). The results of these three studies are a clear indication that this has been successful as the project gathered over 800 descriptions of real-world situations from over 200 people. Another goal of this research project was, “to develop and to demonstrate a widely-useful instrument for the assessment of situations” (Funder, 2007, p. 15). Or in other words, the

goal was to examine the validity of the RSQ for measuring the psychologically relevant properties of situations. In all three studies presented here, the RSQ seems to be measuring what it is supposed to be measuring—namely psychologically relevant properties of situations—as evidenced by the fact that all three studies found theoretically predictable relationships between persons, situations, and behavior. Indeed, the success of the version of the RSQ employed in these studies (version 2.0) has led to the continual development and improvement of the RSQ item content. Its latest version (3.14 at the time of this writing) includes 88 items and is now available on the web (<http://rap.ucr.edu/qsorter/RSQ3-14.pdf>).

The success of this project and the continual development of the RSQ will no doubt lead to future investigations using the RSQ. Indeed at the time of this writing an international situation assessment project is underway and a new project examining the Situation Construal Model (see Figure 4-1) in an experimental context is scheduled for launch in Fall of 2011 (Funder, 2011). These projects intend to explore questions regarding cultural differences in situation experiences/perceptions and how personality may predict situation construal respectively. But beyond these, the tree of questions about situations is ripe with low hanging fruit for the willing researcher to grab. One of these is in the continual development of the RSQ, because while the RSQ represents an excellent starting point for the assessment of the psychologically important properties of situations, one wonders what might be missing from the instrument. For example, the current version of the RSQ seems to be missing an item quantifying time-constraints the situation may be placing on the person. Perhaps a future version of the RSQ will include an item

such as, “Time is of the essence” to remedy this issue. Beyond developmental issues, a number of theoretically important questions remain to be answered. For example, what is the underlying psychological structure of situations? As another example, can the RSQ be used to identify the psychologically distinguishing characteristics of evolutionarily important situations (Kenrick & Shiota, 2008)? Finally, going beyond theory, one wonders how or when the RSQ might be employed to examine practical problems such as why nurse turnover is higher at one hospital than another, or why employees in one department seem happy while employees in another are dissatisfied? If I may be so bold as to make a prediction, I suspect that in the years ahead the RSQ will serve as the foundation for future situation assessment instruments and perhaps someday an ultimate taxonomy of situations.

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Appendix A  
Riverside Situational Q-Sort (version 2) Full Item Content

1. Someone is trying to impress someone or convince someone of something.
2. P is counted on to do something.
3. Talking is permitted, invited, or conventionally expected.
4. P is asked for something, or someone is in need.
5. Minor details in a task or situation might be important to some.
6. Situation evokes values concerning lifestyles or politics.
7. Affords an opportunity to demonstrate intellectual capacity (e.g., an intellectual discussion, a problem needs to be solved).
8. Situation is uncertain or complex.
9. Situation is potentially enjoyable.
10. Another person [present or discussed] is under threat.
11. P is being criticized, directly or indirectly.
12. P is being insulted, directly or implicitly.
13. Someone might potentially or is attempting to dominate or “boss” P.
14. Situation is playful.
15. Affords an opportunity for introspection (e.g., reflection upon deeply personal issues).
16. Someone [present or discussed] is unhappy or suffering.
17. Affords an opportunity to seek reassurance (e.g., situation might undermine P’s confidence, or a potentially reassuring other is present).
18. Activities might potentially proceed at a slow or fast pace.
19. P might need or appear to need the support and nurturance of others.
20. P might potentially be blamed for something.

21. A decision might be made on rational or irrational grounds.
22. Self-restraint is desirable but difficult.
23. A job needs to be done.
24. Situation involves competition.
25. Affords an opportunity to do things that might make P liked or accepted.
26. Others are present who might need or desire advice and reassurance.
27. Situation entails frustration and adversity.
28. Physical attractiveness (of P) is salient.
29. P might make a positive or negative impression on others.
30. Context would make some people tense and upset.
31. Situation includes one or more small frustrations or annoyances.
32. Situation might evoke warmth or compassion.
33. A person or activity could be undermined or sabotaged.
34. Affords an opportunity to be honest or deceitful.
35. Situation may cause feelings of hostility.
36. Affords an opportunity to express unusual ideas or points of view.
37. Context is potentially threatening or fear-inducing (to P).
38. Situation raises moral or ethical issues (e.g., a moral dilemma is present; a discussion of morality).
39. The situation calls for a quick resolution or commitment to a particular course of action.
40. Situation allows a free range of emotional expression.
41. Others present might have conflicting or hidden motives.

42. Situation entails or could entail stress or trauma.
43. Affords an opportunity to ruminate, daydream or fantasize.
44. Situation has the potential to arouse guilt (in P).
45. Close personal relationships are present or have the potential to develop.
46. Situation raises issues of trust or mistrust.
47. Context includes intellectual or cognitive stimuli (e.g., books, lectures, intellectual conversation).
48. Assertiveness is required to accomplish a goal.
49. Context includes potential for immediate gratification of desires (e.g., food, shopping, sexual opportunities).
50. Social interaction is possible.
51. Situation is humorous or potentially humorous (if one finds that sort of thing funny).
52. P is the focus of attention.
53. Context includes sensuous stimuli (e.g., touch, taste, smell, physical contact).
54. Context is relevant to P's bodily health (e.g., possibility of illness; a medical visit).
55. Success in this situation requires self-insight.
56. P controls resources needed by others.
57. Behavior of others presents a wide range of interpersonal cues.
58. Situation includes implicit or explicit behavioral limits (that might or might not be challenged).
59. Context includes aesthetic stimuli (e.g., art, music, drama, beauty).
60. Context is potentially anxiety-inducing.
61. Context includes explicit or implicit demands on P.
62. Affords an opportunity to express or demonstrate ambition.

63. Context raises issues of personal adequacy (e.g., includes demands or expectations that P might not be able to meet).
64. Context includes stimuli that could be construed sexually.
65. Situational demands are rapidly shifting.
66. Context has potential to arouse feelings of victimization or self-pity by P.
67. Members of the opposite sex are present (especially those who are potential romantic partners, at least hypothetically).
68. Context has potential to arouse internal conflicts and related anxiety (e.g., ambivalence, approach-avoidance, competing motivations).
69. Context is basically simple and clear-cut.
70. Affords an opportunity to express one's charm.
71. Situation involves social comparison.
72. Context raises issues of power (for P or others present).
73. Affords an opportunity to express masculinity or femininity (depending on whether P is male or female, respectively).
74. Others may need or are requesting advice from P.
75. P's independence and autonomy is questioned or threatened.
76. Context is potentially emotionally arousing.
77. Affords an opportunity for demonstrating verbal fluency (e.g., a debate, a monologue, an active conversation).
78. Others present occupy a variety of social roles or levels of status.
79. P is being pressured to conform to the actions of others.
80. Success requires cooperation.
81. P is being complimented or praised.

Note. P refers to the Person in the situation.



## Appendix B

### List of 42 CAQ (personality)-RBQ (behavior) Analogues in CAQ Item Order

| CAQ Item (personality)  | RBQ Item (behavior)   |
|---|---|
| 01 - Is critical, skeptical, not easily impressed.  | 19 - Expresses criticism. (of anybody or anything) (Low placement = expresses praise.)  |
| 03 - Has a wide range of interests. <i>Regardless of how deep or superficial the interests may be.</i>  | 16 - Shows a wide range of interests. (e.g., talks about many topics)   |
| 04 - Is a talkative individual.   | 20 - Is talkative. (as observed in this situation)  |
| 08 - Appears to have a high degree of intellectual capacity. <i>This item refers to capability, not necessarily performance. Also, originality is not assumed.</i>  | 23 - Exhibits a high degree of intelligence (Give this item high placement only if P actually says or does something of high intelligence. Low placement = exhibition of low intelligence. Medium placement = no information one way or another.) |
| 10 - Anxiety and tension find outlet in bodily symptoms. <i>Low Placement implies that body does not react at all to stress (e.g., person does not perspire, shake, or have other bodily signs of nervousness.) High Placement implies bodily dysfunction or physical illness caused by stress.</i> | 22 - Show physical signs of tension or anxiety. (e.g., fidgets nervously, voice wavers) (Middle placement = Lack of signs of anxiety. Low placement = lack of signs under circumstances where you would expect them.)                             |
| 14 - Genuinely submissive; accepts domination comfortably. [REVERSE SCORED]   | 05 - Dominates the situation. (Disregard intention, e.g., if P dominates the situation by default because other(s) present does very little, this item should receive high placement.)  |
| 17 - Behaves in a sympathetic or considerate manner.  | 24 - Expresses sympathy. (to anyone, i.e., including conversational references) (Low placement = unusual lack of sympathy.)   |
| 18 - Initiates humor. <i>E.g., makes jokes or tells humorous stories.</i>   | 25 - Initiates humor.   |
| 19 - Seeks reassurance from others.   | 26 - Seeks reassurance. (e.g., asks for agreement, fishes for praise)   |
| 20 - Has a rapid personal tempo; behaves and acts quickly.  | 61 - Speaks quickly. (Low placement = speaks slowly.)   |
| 23 - Extrapunitive; tends to transfer or project blame. <i>Tends to blame others for own failures or faults.</i>  | 46 - Blames others. (for anything)  |
| 26 - Is productive; gets things done.   | 64 - Concentrates on or works hard at a task.   |
| 27 - Shows condescending behavior in relations with others. <i>Acts as if self is superior to others. Low Placement implies only absence of acting superior, not necessarily acting as if all people are equal or that self is inferior to others.</i>  | 27 - Exhibits condescending behavior. (e.g., acts as if self is superior to other(s) [present, or otherwise]) (Low placement = acting inferior.)  |
| 28 - Tends to arouse liking and acceptance in people.   | 28 - Seems likable. (to other(s) present)   |
| 29 - Is turned to for advice and reassurance.   | 63 - Other(s) seeks advice from P.  |
| 30 - Gives up and withdraws where possible in   | 50 - Gives up when faced with obstacles. (Low   |

|  |   |
|--|---|
| the face of frustration and adversity. <i>Low Placement implies person tries even harder when obstacles appear. High Placement implies generally defeatist, gives up easily.</i> | placement implies unusual persistence.)   |
| 31 - Regards self as physically attractive.  | 30 - Appears to regard self as physically attractive.   |
| 33 - Is calm, relaxed in manner.   | 06 – Appears to be relaxed and comfortable.   |
| 34 - Over-reactive to minor frustrations; irritable.   | 31 - Acts irritated.  |
| 35 - Has warmth; has the capacity for close relationships; compassionate.  | 32 - Expresses warmth. (to anyone, e.g., including affectionate references to close friends, etc.)  |
| 36 - Is subtly negativistic; tends to undermine and obstruct or sabotage.  | 33 - Tries to undermine, sabotage or obstruct.  |
| 38 - Has hostility toward others. <i>Feelings of hostility are intended here, regardless of how or whether they are actually expressed.</i>                                      | 34 - Expresses hostility. (no matter toward whom or what)   |
| 40 - Is vulnerable to real or fancied threat, generally fearful.   | 36 - Behaves in a fearful or timid manner.  |
| 43 - Is facially and/or gesturally expressive.   | 37 - Is expressive in face, voice or gestures.  |
| 46 - Engages in personal fantasy and daydreams, fictional speculations.  | 38 - Expresses interest in fantasy or daydreams. (Low placement only if such interest is explicitly disavowed.)                                       |
| 47 - Has a readiness to feel guilt. <i>Feelings of guilt are intended here, regardless of how or whether they are actually expressed.</i>  | 39 - Expresses guilt. (about anything)  |
| 48 - Keeps people at a distance; avoids close interpersonal relationships.   | 40 - Keeps other(s) at a distance; avoids development of any sort of interpersonal relationship. (Low placement = behavior to get close to other(s).) |
| 51 - Genuinely values intellectual and cognitive matters. <i>Ability or achievement is not implied here.</i>   | 41 - Shows interest in intellectual or cognitive matters. (discusses an intellectual idea in detail or with enthusiasm)                               |
| 55 - Is self-defeating. <i>Acts in ways which undermine, sabotage, or frustrate his or her own goals and desires.</i>  | 44 - Says negative things about self. (e.g., is self-critical; expresses feelings of inadequacy)  |
| 57 - Is an interesting, arresting person.  | 43 - Says or does something interesting.  |
| 67 - Is self-indulgent. <i>Reluctant to deny self pleasure; tends to spoil self with pleasurable activities.</i>   | 66 - Acts in a self-indulgent manner. (e.g., spending, eating, or drinking) (Low placement implies self-denial.)                                      |
| 68 - Is basically anxious. <i>Nervous, worries a lot underneath.</i>   | 21 - Expresses insecurity. (e.g., seems touchy or overly sensitive)   |
| 71 - Has high aspiration level for self.   | 45 - Displays ambition. (e.g., passionate discussion of career plans, course grades, opportunities to make money)                                     |
| 73 - Tends to perceive many different contexts in sexual terms; eroticizes situations. <i>Sees</i>   | 48 - Expresses sexual interest. (e.g., acts attracted to someone present; expresses interest  |

|  |   |
|--|---|
| <i>sexual overtones in most interactions.</i>  | in dating or sexual matters in general)   |
| 78 - Feels cheated and victimized by life; self-pitying.   | 47 - Expresses self-pity or feelings of victimization.  |
| 84 - Is cheerful. <i>Low Placement implies unhappiness or depression.</i>  | 49 - Behaves in a cheerful manner.  |
| 88 - Is personally charming. [REVERSE SCORED]  | 13 - Exhibits an awkward interpersonal style. (e.g., seems to have difficulty knowing what to say, mumbles, fails to respond to conversational advances)  |
| 92 - Has social poise and presence; appears socially at ease.  | 07 - Exhibits social skills. (e.g., makes other(s) comfortable, keeps conversation moving, entertains or charms other(s))   |
| 93 - a. Behaves in a masculine style and manner. b. Behaves in a feminine style and manner. <i>The culture's definition of masculinity or femininity is to be applied here. If subject is male, 93a. applies; if subject is female, 93b. is to be evaluated.</i> | 51 - Behaves in a stereotypically masculine or feminine style or manner. (Apply the usual stereotypes appropriate to the sex of P. Low placement = behavior stereotypical of the opposite sex.) |
| 95 - Tends to proffer advice. <i>Proffer = offer or give.</i>  | 52 - Offers advice.   |
| 97 - Is emotionally bland; has flattened affect. <i>Tends not to experience strong or intense emotions.</i>  | 08 - Is reserved and unexpressive. (e.g., expresses little affect; acts in a stiff, formal manner)  |
| 98 - Is verbally fluent; can express ideas well.   | 53 - Speaks fluently and expresses ideas well.  |

### Appendix C

#### Means for RSQ Item Residuals Predicting Self-RSQ Profiles from Rater Composite Profiles

| ## - RSQ Item                                 | Time 1      | Time 2      | Time 3      | Time 4      |
|---|-------------|-------------|-------------|-------------|
|   | N = 205     | N = 203     | N = 203     | N = 203     |
| 01 - Trying to impress/convince               | -.21 (1.04) | -.13 (1.07) | -.09 (1.07) | -.04 (1.09) |
| 02 - Counted on to do something               | .37 (1.00)  | .29 (0.99)  | .49 (0.99)  | .30 (0.98)  |
| 03 - Talking permitted/invited/expected       | .20 (0.95)  | .28 (0.88)  | .25 (0.94)  | .29 (0.91)  |
| 04 - Asked for something/Someone in need      | .21 (1.07)  | .16 (0.96)  | .09 (0.97)  | .16 (0.90)  |
| 05 - Minor details important                  | .04 (0.94)  | .07 (0.79)  | .05 (0.88)  | .07 (0.86)  |
| 06 - Evokes lifestyle/political values        | -.24 (1.19) | -.16 (1.11) | -.13 (1.09) | -.08 (1.13) |
| 07 - Can demonstrate intell. capacity         | .25 (1.01)  | .13 (0.98)  | .14 (1.01)  | .20 (0.99)  |
| 08 - Uncertain/complex                        | -.15 (1.06) | -.07 (0.98) | -.14 (1.00) | -.13 (1.03) |
| 09 - Potentially enjoyable                    | .20 (0.91)  | .26 (0.82)  | .34 (0.82)  | .26 (0.87)  |
| 10 - Another is under threat                  | -.72 (0.76) | -.70 (0.76) | -.68 (0.77) | -.75 (0.71) |
| 11 - Is being criticized                      | -.44 (0.89) | -.46 (0.87) | -.34 (0.92) | -.36 (0.92) |
| 12 - Is being insulted                        | -.65 (0.70) | -.61 (0.76) | -.52 (0.74) | -.43 (0.86) |
| 13 - One might dominate                       | -.46 (0.91) | -.53 (0.87) | -.42 (0.95) | -.33 (0.90) |
| 14 - Playful                                  | .32 (0.87)  | .28 (0.84)  | .37 (0.92)  | .41 (0.90)  |
| 15 - Allows for introspection                 | .05 (1.00)  | .04 (0.97)  | .04 (1.05)  | -.03 (0.95) |
| 16 - One is unhappy/suffering                 | -.18 (0.90) | -.27 (0.94) | -.19 (0.94) | -.29 (0.91) |
| 17 - Allows for seeking reassurance           | -.26 (0.87) | -.29 (0.83) | -.29 (0.80) | -.30 (0.84) |
| 18 - Pace is slow or fast                     | .29 (0.70)  | .22 (0.76)  | .22 (0.77)  | .15 (0.81)  |
| 19 - Needs support of others                  | -.19 (0.95) | -.29 (0.87) | -.41 (0.90) | -.43 (0.87) |
| 20 - Potential for blame                      | -.46 (0.92) | -.41 (0.84) | -.48 (0.82) | -.41 (0.84) |
| 21 - Allows for rational/irrational decisions | -.13 (0.84) | -.16 (0.79) | -.15 (0.87) | -.23 (0.89) |
| 22 - Self-restraint desired but diff.         | -.09 (0.89) | -.18 (0.85) | -.04 (0.94) | -.20 (0.89) |
| 23 - Job needs to be done                     | .57 (0.91)  | .63 (0.91)  | .66 (0.87)  | .51 (0.88)  |
| 24 - Involves competition                     | .18 (0.94)  | .06 (0.92)  | .13 (0.92)  | .08 (0.91)  |
| 25 - Allows for liking or acceptance          | -.19 (0.74) | -.27 (0.88) | -.31 (0.82) | -.28 (0.88) |
| 26 - Others need/desire advice/reassurance    | -.13 (0.86) | -.14 (0.87) | -.24 (0.87) | -.15 (0.85) |
| 27 - Frustrating or adverse                   | .16 (0.93)  | .22 (0.92)  | .16 (0.90)  | .14 (0.85)  |
| 28 - Phys. attract. salient                   | -.41 (0.91) | -.44 (0.86) | -.41 (0.93) | -.30 (0.90) |
| 29 - Pos. or Neg. impression possible         | -.08 (0.78) | -.13 (0.79) | -.13 (0.77) | -.14 (0.80) |
| 30 - Possible tension                         | -.18 (0.92) | .14 (0.85)  | -.02 (0.86) | -.09 (0.86) |
| 31 - Small frustrations/annoyances            | .26 (0.78)  | .29 (0.88)  | .15 (0.83)  | .17 (0.87)  |
| 32 - Evokes warmth/compassion                 | .25 (0.83)  | .14 (0.78)  | .01 (0.82)  | .23 (0.81)  |
| 33 - Potential undermining/sabotage           | -.36 (0.84) | -.44 (0.84) | -.45 (0.84) | -.49 (0.83) |
| 34 - Allows honesty or deceit                 | .21 (0.77)  | .03 (0.87)  | -.03 (0.85) | .04 (0.84)  |
| 35 - Can cause hostility                      | .10 (0.79)  | .05 (0.87)  | -.02 (0.86) | .02 (0.86)  |
| 36 - Allows for unusual ideas                 | .18 (0.85)  | -.02 (0.84) | -.12 (0.91) | .05 (0.82)  |
| 37 - Potentially threatening                  | -.29 (0.67) | -.21 (0.77) | -.21 (0.75) | -.28 (0.70) |
| 38 - Raises moral/ethical concerns            | .29 (0.87)  | .21 (0.91)  | .18 (0.88)  | .20 (0.83)  |
| 39 - Calls for quick resolution               | .01 (0.85)  | .15 (0.82)  | .07 (0.82)  | .02 (0.80)  |
| 40 - Allows for emotional expression          | .11 (0.76)  | .27 (0.82)  | .16 (0.83)  | .29 (0.75)  |
| 41 - Others have hidden motives               | -.21 (0.76) | -.21 (0.77) | -.14 (0.81) | -.26 (0.75) |
| 42 - Could entail stress or trauma            | -.04 (0.83) | -.05 (0.87) | .06 (0.85)  | -.09 (0.89) |
| 43 - Allows for daydreaming/rumination        | -.03 (0.90) | .07 (0.89)  | .07 (0.92)  | .09 (0.82)  |
| 44 - Can arouse guilt                         | -.22 (0.72) | -.26 (0.77) | -.22 (0.78) | -.20 (0.73) |

|   |             |             |             |             |
|---|-------------|-------------|-------------|-------------|
| 45 - Close relationships present/developing | -.14 (0.84) | -.03 (0.76) | -.02 (0.79) | -.17 (0.86) |
| 46 - Trust vs. Mistrust issues raised       | .03 (0.72)  | .07 (0.81)  | .01 (0.76)  | -.04 (0.78) |
| 47 - Includes intell. stimuli               | .27 (0.84)  | .24 (0.79)  | .14 (0.83)  | .17 (0.78)  |
| 48 - Assertiveness required                 | .41 (0.82)  | .48 (0.81)  | .49 (0.78)  | .40 (0.82)  |
| 49 - Allows for immediate gratification     | -.16 (0.85) | .01 (0.83)  | .00 (0.83)  | -.11 (0.81) |
| 50 - Social interaction possible            | .26 (0.72)  | .29 (0.76)  | .19 (0.76)  | .19 (0.62)  |
| 51 - Is or potentially is humorous          | .32 (0.88)  | .25 (0.86)  | .25 (0.80)  | .38 (0.75)  |
| 52 - P is focus of attention                | .01 (0.88)  | -.02 (0.94) | .03 (0.83)  | .02 (0.90)  |
| 53 - Includes sensuous stimuli              | .02 (0.84)  | .05 (0.79)  | .05 (0.78)  | .07 (0.81)  |
| 54 - Relevant to P's health                 | .16 (0.75)  | .24 (0.73)  | .24 (0.71)  | .31 (0.81)  |
| 55 - Requires self-insight for success      | .37 (0.69)  | .28 (0.77)  | .22 (0.72)  | .27 (0.72)  |
| 56 - P controls resources                   | -.02 (0.78) | .06 (0.74)  | .00 (0.78)  | -.04 (0.74) |
| 57 - Has wide range of interpersonal cues   | -.25 (0.64) | -.18 (0.64) | -.27 (0.65) | -.18 (0.67) |
| 58 - Has behavioral limits                  | -.28 (0.67) | -.33 (0.74) | -.24 (0.71) | -.31 (0.69) |
| 59 - Includes aesthetic stimuli             | .13 (0.80)  | .02 (0.92)  | -.02 (0.82) | .02 (0.85)  |
| 60 - Potentially anxiety-inducing           | -.10 (0.73) | .03 (0.80)  | .01 (0.76)  | -.04 (0.70) |
| 61 - Includes demands                       | -.22 (0.72) | -.24 (0.66) | -.14 (0.75) | -.21 (0.74) |
| 62 - Allows expression of ambition          | .18 (0.68)  | .17 (0.74)  | .18 (0.70)  | .12 (0.70)  |
| 63 - Raises issues of personal adequacy     | .00 (0.72)  | -.03 (0.66) | .10 (0.79)  | .14 (0.65)  |
| 64 - Allows for sexual construal of stimuli | -.18 (0.70) | -.23 (0.79) | -.24 (0.80) | -.17 (0.84) |
| 65 - Demands shift rapidly                  | .13 (0.69)  | .19 (0.72)  | .18 (0.67)  | .24 (0.66)  |
| 66 - Can arouse feelings of self-pity       | -.01 (0.68) | -.14 (0.77) | -.06 (0.72) | -.07 (0.70) |
| 67 - Opposite sex is present                | .10 (0.91)  | .15 (0.94)  | .17 (0.94)  | .21 (0.85)  |
| 68 - Can arouse internal conflicts          | .06 (0.70)  | -.03 (0.74) | .04 (0.71)  | .01 (0.72)  |
| 69 - Simple/clear-cut                       | .11 (0.70)  | .07 (0.82)  | .10 (0.76)  | .00 (0.71)  |
| 70 - Allows expression of charm             | .00 (0.69)  | .01 (0.73)  | .04 (0.70)  | .15 (0.68)  |
| 71 - Allows for social comparison           | .24 (0.70)  | .17 (0.65)  | .26 (0.64)  | .20 (0.63)  |
| 72 - Raises power issues                    | .18 (0.69)  | .20 (0.62)  | .23 (0.63)  | .23 (0.65)  |
| 73 - Allows expression of masc/fem.         | -.20 (0.73) | -.11 (0.72) | -.03 (0.71) | -.04 (0.70) |
| 74 - Advice needed/requested                | .00 (0.65)  | -.01 (0.73) | -.05 (0.68) | .00 (0.69)  |
| 75 - P's independence questioned            | .26 (0.73)  | .17 (0.67)  | .22 (0.73)  | .17 (0.71)  |
| 76 - Can be emotionally arousing            | -.08 (0.71) | .01 (0.78)  | -.05 (0.70) | -.09 (0.74) |
| 77 - Allows for verbal fluency              | -.11 (0.83) | .02 (0.77)  | -.13 (0.72) | .02 (0.74)  |
| 78 - Others occupy various social roles     | -.02 (0.74) | -.03 (0.68) | .03 (0.70)  | .06 (0.70)  |
| 79 - P is pressured to conform              | .10 (0.77)  | .03 (0.79)  | .11 (0.76)  | .06 (0.73)  |
| 80 - Success requires cooperation           | .30 (0.81)  | .34 (0.79)  | .24 (0.84)  | .31 (0.78)  |
| 81 - P is complimented/praised              | .22 (0.73)  | .19 (0.70)  | .23 (0.73)  | .31 (0.66)  |

Note. RSQ Item content abbreviated. SDs in parentheses. Average correlation amongst residual mean vectors  $r = .94$ . Average correlation amongst residual SD vectors  $r = .87$ .

## Appendix D

### Technical Details and Source Code for the Computation of p-values for the Meta-Analytically Combined Correlations in Chapter 3

For the meta-analytically combined correlations displayed in Tables 4-2 through 4-9 an issue of non-independence arises because the same participants reported being in up to four possible situations. Thus, each participant provided as many as four scores for each RSQ item. While this non-independence has no impact on the effect sizes displayed, assuming independence among the scores, as most published meta-analytic procedures do, could result in improper p-values. To combat this issue, a randomization test was employed to estimate the p-values for each correlation. The randomization procedure used in Chapter 3 worked as follows (see also the R source code below). First, correlate the personality trait of interest with the RSQ item residuals (after statistically controlling for coder rating) for each visit completed by the participants. Next, use Fisher's z-to-r transformation to normalize the resulting four  $r$ s and compute the average. Then back transform this average normalized  $r$  back into a correlation coefficient  $r$ . This number is the number that appears for each item in the tables. To estimate the p-value associated with this meta-analytically combined  $r$ , create a pseudo-sample by randomly assigning the original personality scores to a participant's array of 4 RSQ residual scores, thus maintaining any initial non-independence among the RSQ scores. For this pseudo-sample, follow the aforementioned procedure to get a meta-analytically combined  $r$  which can be denoted as  $r^*$  to indicate that it comes from a pseudo-sample. Repeat this

procedure many times (in this case 1000) to create a distribution of  $r^*$ s. Finally, compare the meta-analytically combined correlation coefficient that appears in the tables to the distribution of pseudo- $r$ s to estimate a p-value. In all cases, a two-tailed test was employed such that original values appearing in the lower 2.5<sup>th</sup> or 97.5<sup>th</sup> percentiles of the pseudo-distribution were indicated as  $p < .05$ , and so on for  $p < .01$  and  $p < .001$ , etc.

An R function for computing such values was created by me and it is shown here below. Of note, the function computes both weighted and unweighted effect sizes following standard meta-analytic procedures (Rosenthal & Rosnow, 2008) as well as three types of p-values. The first type of p-value (“normp”) follows Laplace’s central limit theorem and assumes the pseudo- $r$ s are distributed normally. The second type is the type described above and used for reporting in the analyses appearing in Tables 4-2 through 4-9. The third type follows the Stouffer method as described by Mosteller and Bush (1954). In all cases described in this dissertation, the three different p-values were extremely close to one another. Lastly, the function provides an option for computing 95% confidence intervals via the randomization test method described above. The function requires that the “psych” library be installed and loaded.

## R Code for Computing p-values for Meta-Analytically Combined *rs*

```
cor.comb <- function(y1, y2, y3, y4, x1, x2, x3, x4, sims=1000, hist=FALSE, rnd=5,
CI=T, simple=F) {
  library(psych)
  sim.dist <- rep(0, sims)
  set1 <- cbind(y1, x1)
  set2 <- cbind(y2, x2)
  set3 <- cbind(y3, x3)
  set4 <- cbind(y4, x4)
  comp1 <- data.frame(subset(set1, complete.cases(set1)))
  comp2 <- data.frame(subset(set2, complete.cases(set2)))
  comp3 <- data.frame(subset(set3, complete.cases(set3)))
  comp4 <- data.frame(subset(set4, complete.cases(set4)))
  yvec1 <- data.frame(comp1[,1])
  yvec2 <- data.frame(comp2[,1])
  yvec3 <- data.frame(comp3[,1])
  yvec4 <- data.frame(comp4[,1])
  xvec1 <- data.frame(comp1[,2])
  xvec2 <- data.frame(comp2[,2])
  xvec3 <- data.frame(comp3[,2])
  xvec4 <- data.frame(comp4[,2])
  n1 <- nrow(yvec1)
  n2 <- nrow(yvec2)
  n3 <- nrow(yvec3)
  n4 <- nrow(yvec4)

  Zr1 <- fisherz(cor(comp1$y1,comp1$x1))
  Zr2 <- fisherz(cor(comp2$y2,comp2$x2))
  Zr3 <- fisherz(cor(comp3$y3,comp3$x3))
  Zr4 <- fisherz(cor(comp4$y4,comp4$x4))
  Comb <- fisherz2r((Zr1 + Zr2 + Zr3 + Zr4) / 4)
  WgtES <- fisherz2r(sum((n1-3)*Zr1, (n2-3)*Zr2, (n3-3)*Zr3, (n4-3)*Zr4)/sum(n1-3,n2-
3,n3-3,n4-3))

  if (simple==T) {return(round(Comb,rnd))}

  for (i in 1:sims) {
    order1 <- sample(n1, n1, replace=FALSE) #Generate a sample of random orders
    order2 <- sample(n2, n2, replace=FALSE)
    order3 <- sample(n3, n3, replace=FALSE)
    order4 <- sample(n4, n4, replace=FALSE)
    sim1 <- fisherz(cor(yvec1[order1,],xvec1))
    sim2 <- fisherz(cor(yvec2[order2,],xvec2))
```



```

sim3 <- fisherz(cor(yvec3[order3,],xvec3))
sim4 <- fisherz(cor(yvec4[order4,],xvec4))
SimAvg <- fisherz2r((sim1 + sim2 + sim3 + sim4) / 4)
sim.dist[i] <- SimAvg
}

if (hist==TRUE) {
  hist(sim.dist)
}

if (Comb > median(sim.dist)) {randp <- sum(sim.dist > Comb)*2 / sims}
if (Comb < median(sim.dist)) {randp <- sum(sim.dist < Comb)*2 / sims}
if (Comb == median(sim.dist)) {randp <- 1.0}
CI5 <- quantile(sim.dist, .025) + Comb
CI95 <- quantile(sim.dist, .975) + Comb
normp <- 2*pnorm(-abs((Comb - mean(sim.dist)) / (sd(sim.dist))))
z1 <- qnorm(cor.test(comp1$y1,comp1$x1)$p.value / 2)
z2 <- qnorm(cor.test(comp2$y2,comp2$x2)$p.value / 2)
z3 <- qnorm(cor.test(comp3$y3,comp3$x3)$p.value / 2)
z4 <- qnorm(cor.test(comp4$y4,comp4$x4)$p.value / 2)
ifelse(Zr1 < 0, z1 <- -1*z1, ifelse(Zr1==0, z1 <- 0, z1 <- z1))
ifelse(Zr2 < 0, z2 <- -1*z2, ifelse(Zr2==0, z2 <- 0, z2 <- z2))
ifelse(Zr3 < 0, z3 <- -1*z3, ifelse(Zr3==0, z3 <- 0, z3 <- z3))
ifelse(Zr4 < 0, z4 <- -1*z4, ifelse(Zr4==0, z4 <- 0, z4 <- z4))
stoufp <- 2*pnorm(-abs((z1 + z2 + z3 + z4) / sqrt(4)))

if (CI==F) {
  out <- round(cbind(Comb, WgtES, normp, randp, stoufp),rnd)
  colnames(out) <- c("UnWgt r", "Wgt r", "Normal p", "Rand p", "Stouffer p")
  rownames(out) <- c("Results")
  return(out)
}

else {
  out <- round(cbind(Comb, WgtES, normp, randp, stoufp, CI5, CI95),rnd)
  colnames(out) <- c("UnWgt r", "Wgt r", "Normal p", "Rand p", "Stouffer p", "LL",
"UL")
  rownames(out) <- c("Results")
  return(out)
}
}

```