2012

Trustworthiness and influence in task groups focused on a single group member

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TRUSTWORTHINESS AND INFLUENCE IN TASK GROUPS FOCUSED ON A SINGLE GROUP MEMBER

by

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An Abstract

Of a thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Sociology in the Graduate College of The University of Iowa

July 2012

Thesis Supervisor: Associate Professor Alison Bianchi

ABSTRACT

Task groups focused on helping a single group member perform well on a task, or the advice-seeking situation, is a familiar occurrence in everyday life: patients and physicians work together to help the patient manage his or her quality of life, students and teachers work together to ensure that the student achieves academic success, and lawyers meet with clients to organize evidence in favor of the client. Rare, however, is the formal application of group process theories to understand these situations. The omission is particularly unfortunate given the preponderance of research documenting inequities in the outcomes for the focal team member, such as the provision of health care to patients. Group process theories are rich with formal statements that explain the processes by which such inequities occur and sustain themselves, which can then be used to develop interventions. The goal of this dissertation is to present such an application in a variety of populations and settings.

At the same time, the advice-seeking situation presents itself as an opportunity to extend what we know about groups. Crucial for these groups are patterns of influence and trustworthiness. The advice-seeker is transferring a part of his or her agency over to the other group member(s). In return, there is an expectation that the group holds knowledge that will be effective in making decisions about the advice-seeker's situation. Whether the advice-seeker accepts this knowledge and it sways his or her decision-making is contingent on the perceived trustworthiness of the group. Our current claims about influence and trustworthiness will be tested to assess how well they apply to the advice-seeking situation. Moreover, as I detail in the chapters of this dissertation, the application reveals two interrelated insights on trustworthiness that have received little empirical or theoretical attention in previous research: 1) that it is shaped by the relational context, and 2) that advice-seekers may over- or undertrust the group. These two insights, I suggest, describe key mechanisms by which inequities occur.

The group process theory that I extended to understand the advice-seeking situation is status characteristics theory (SCT), which explains the organization of impressions and behavior in groups that are both task- and collectively oriented. I conducted three different studies and used two different methods: laboratory experiments and secondary analysis of survey data. For the laboratory experiments, I modified the standardized experimental setting customarily used among researchers in the SCT tradition to capture theoretically relevant qualities in the advice-seeking situation. In Chapter 2, I describe results from laboratory experiments designed to test how well SCT explains patterns of influence and the emergence of trustworthiness in the advice-seeking situation. Chapter 3 is a summary of a secondary analysis of a patient survey. In Chapter 4, I summarize another laboratory experiment, this time designed to understand how trust breaks in the advice-seeking situation. In Chapter 5, I begin reflecting on the findings I presented in the three earlier chapters and propose one research study to address a few remaining questions. Chapter 6 is the final discussion and conclusion to the studies in this dissertation.

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CERTIFICATE OF APPROVAL

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PH.D. THESIS

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This is to certify that the Ph.D. thesis of

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To Juan, the “kids,” y mi mamá

ACKNOWLEDGEMENTS

The research described in this dissertation was supported in part by a Doctoral Dissertation Improvement Grant from the National Science Foundation (SES-1102946), a pre-doctoral National Institute for Mental Health training grant (T32) from the American Sociological Association, a research grant from the Graduate College of The University of Iowa, and a research grant from the Department of Sociology at The University of Iowa. The Center for the Study of Group Processes (CSGP) at The University of Iowa provided space and resources for executing parts of this research. Danielle DeBrower, R. Paul Gray IV, and Taylor Stout provided research assistance at the CGSP. The HIV Cost and Services Utilization Study (HCSUS) was being conducted under cooperative agreement HS08578 (Martin F. Shapiro, principle investigator; Samuel A. Bozette, co-principal investigator) between RAND Corporation and the Agency for Healthcare Research and Quality. Additional funding for the HCSUS came from the Health Resources and Services Administration; the National Institute of Mental Health; the National Institute of Drug Abuse; the National Institute of Health Office of Minority Health; the National Institute for Dental Research; the Robert Wood Johnson Foundation; Merck and Company, Inc.; Glaxo Wellcome; the National Institute of Aging; and the Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services.

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CHAPTER 1: INTRODUCTION

The majority of the literature examining groups focuses solely on those whose members cooperate together to achieve a common goal that affects all group members. A jury's primary measure of success, for example, is in achieving consensus among all jurors; if consensus is not reached then all jurors failed. This situation has become the quintessential task group, identified early on by pioneering group processes researchers like Bales (1950). Missing from the literature is a comprehension of groups whose members meet for the sole purpose of helping a single group member perform well on a task, a situation I will refer to as the *advice-seeking situation*. Examples of this situation include: graduate students who meet with their advisers to polish a manuscript, defendants who meet with their lawyers to manage legal dilemmas, and patients who meet with their physicians to control physical health issues.

A large body of literature exists where researchers examine these advice-seeking situations, particularly in the context of clients seeking the consultation of professionals. Professionalization of an occupation involves making it a full-time occupation, creating schools for specialized training, and forming trade associations with accompanying code of ethics. To my knowledge, little research has been conducted examining these situations formally by applying theories from group processes research to inform our knowledge about interactions like those mentioned. The goal of this dissertation is to begin to refine our current group process theories to better understand the group dynamics of the advice-seeking situation. The concrete example that I will be using in this dissertation is the patient-provider dyad.

Crucial for these situations is trust, which is the belief that transferring control to another in a particular situation will involve minimal risk. In the advice-seeking situation, the group member seeking assistance (e.g., the graduate student, client, or patient) is transferring (at least partial) control of his or her own individual goal to another group member (e.g., the adviser, therapist, or physician) who acts as a consultant in decision-making regarding the goal. The majority of researchers examining trust in these situations view trust as a stable attribute of individuals, meaning specific individuals or certain groups of individuals are more likely to trust their consultants than others. Sociological social psychology has viewed trust as an attribute of a relationship, although not necessarily in the context I describe here.

The theory that I will be extending in the next chapters is status characteristics theory (Berger et al. 1977). A brief survey of the asymmetries in the patient-provider dyad suggests that that status processes described in SCT are potentially organizing this type of group's interaction. For instance, Brown et al. (2007) found in their sample of pediatrician-parent medical encounters that gender-concordance increased the number of biomedical questions asked by parents, and pediatricians self-disclosed more with college-educated parents. Moreover, they recorded more laughter occurring in race-concordant encounters than in race-discordant ones. In a study examining parent disclosure of psychosocial information to pediatricians, Wissow et al. (2003) found patterns that resemble those we would expect given differences in social status. African American mothers made fewer disclosures than white mothers, regardless of physician sex, suggesting that race is acting as a salient status characteristic. Also, white mothers

made fewer disclosures with White male physicians than White female physicians, suggesting gender is acting as a salient status characteristic that governs disclosures.

These asymmetries in interaction styles between men and women, for example, have generally been associated with gender role differences (e.g., Lakoff 1975). The current prevailing perspective is that much of the prior research examining style differences confounds status with gender, with researchers like Carli (1990) demonstrating how these distinct processes can be teased out. The style differences – like interruption and assertive speech – tend to appear only during mixed-gender and not same-gender interactions (Zimmerman and West 1975). Consequently, I suggest that the interaction inequalities observed in the physician-patient literature are more representative of status differences rather than inherent qualitative differences between ethnic or gender groups (see West 1984 for a similar argument).

The strength of SCT is its flexibility with respect to historical time and place. The theory does not state specifically what constitutes the development of performance expectations, but rather provides abstract definitions of constructs that researchers can instantiate with specifics particular to a historical time and place. For example, SCT does not explicitly list what constitutes a status characteristic, but instead provides a definition for what could be deemed one. Currently, gender in the U.S. fits the definition, and researchers have used SCT to make predictions about inequalities based on gender distinctions (Ridgeway 2011), yet confirmation that gender is a status characteristic is still bound by contextual particulars. Among older adults (aged over 50), for example, gender appears to not operate as a status characteristic (Hopcroft 2006).

The benefits of the aforementioned flexibility are that researchers and practitioners can use the research program in conjunction with the context of a community to understand patient-provider interaction. Outside of the U.S. there are other categories from which performance expectations are inferred, but even within the U.S. we find variability. Formative research on the local context, as part of community-based participatory research, could provide information on the local referential structures (Berger, Ridgeway, and Zelditch 2002) that confer advantages and disadvantages onto the patient and provider. The contingencies of the context coupled with the relevant basic research from SCT can be used to inform interventions in provider training and patient education programs at the community level.

My approach for filling these gaps in the literature was conducting three studies. Chapter 2 is a laboratory experiment designed to assess how trust emerges in these groups. Chapter 3 tests my assertions in the concrete example, the patient-provider dyad, with a secondary analysis of a survey of patients with HIV. Chapter 4 is a laboratory experiment that I designed to examine how trust breaks in these situations. In Chapter 5, I begin reflecting on the results of these studies and propose to collect semi-structured interviews with patients to refine the theory of the advice-seeking situation. Chapter 6 is a conclusion that not only summarizes the results, but synthesizes them with a new definition of trust.

In all of these chapters, I link social status with trust in ways that researchers have not done in past studies. The basic premise that guides these studies is that high status persons will be perceived as more trustworthy than low status persons. SCT allows me to formalize this claim and test it rigorously using both experimental and survey

methodology. Testing my assertions about SCT in this group situation across different settings and populations also informs the generalizability of these assertions. As outlined above, the results of my studies comprise the rest of this dissertation.

CHAPTER 2: EXPERIMENTAL TEST OF APPLICABILITY OF THEORY TO ADVICE-SEEKING SITUATION

How is trust and influence organized in groups where the goal is to improve the situation of a single member? Oftentimes an individual will seek the advice of others to benefit his or her own situation: patients seek the health advice of physicians, students attend tutoring sessions to improve their grades, and defendants waiting to stand trial request assistance from a lawyer. In these situations, an appropriate level of trust in those providing advice and acceptance of their influence may become critical for improving outcomes: too much trust can lead to a passive state while too little can mean not taking full advantage of another's useful input. Moreover, these situations can become complex with the presence of the primary carriers of expert knowledge – professionals – as this introduces both status and role-identity distinctions that may jointly govern the interaction process. Status characteristics theory (SCT) provides insight into how status shapes influence processes in task- and collectively oriented groups, but says little about how trust emerges or how status and role-identities simultaneously affect outcomes. Furthermore, the theory's most current iteration (Berger and Webster 2006) has scope conditions that are compatible with the advice-seeking situation, but very little research has been conducted to demonstrate this point (see Gallagher et al. 2005 for one exception).

Explicitly testing SCT within the domain of the advice-seeking situation also will further our understanding of trust and trustworthiness. While some have proposed that relative status influences the emergence of trust (e.g., Cook, Hardin, and Levi 2005; 2009), there is a paucity of empirical evidence demonstrating the case. Moreover, current

research on relational trust has focused primarily on the context of network exchange (e.g., Kollock 1994; Molm, Takahashi, and Peterson 2000). Trustworthiness, unlike trust, is primarily viewed as an attribute of the individual (Cook, Hardin, and Levi 2009; Weibel 2007). However, persons and their identities are defined by the situation and relational context (McCall and Simmons 1966), suggesting a need to update this view of trustworthiness. Linking trustworthiness to SCT will provide avenues to address this need in the literature.

In the next section, I provide a theoretical background on SCT, role-identities, and trust. I then formally connect these lines of theory within the context of the advice-seeking group situation. I begin the formalization with a discussion of the current scope statement of SCT and how it relates to the advice-seeking situation. I next explain how and when a role-identity, a cognitive meaning structure we attach to our positions in society (Stryker 1980), can provide status information used in the (non-conscious) formation of informal group hierarchies. Specifically, I focus on role-identities based on occupational structures, such as those for professionals. I follow this with an explication of how the model of trust introduced by Mayer and his colleagues (1995) can be used to understand how trust and trustworthiness follow from knowledge about the status and role-identities of group members. During this discussion, I point out how SCT can be used to explain when individuals will over- and under-trust group members. I then present the results of a laboratory experiment where I modified the standardized experimental setting of SCT (Berger 2007) to test claims derived from the theory and end with implications for future theory and research.

Theoretical Framework

The advice-seeking situation has been classically defined using a social exchange lens (Blau 1964; Homans 1961): the person seeking advice offers prestige and the recognition that he or she is a subordinate in exchange for the advice provided by another. The situation thus implies that there is a status hierarchy, either prior to or as a result of the advice-seeking[1]. This notion is recognized in numerous lines of research that use the flow of advice to infer prestige relations, including physician discussion networks (Burt 1987) and contributions to online support groups (Lampel and Bhalla 2007). More generally, we can view advice as a gift that is offered to either maintain or establish a status relation (Schwartz 1967).

While the processes underlying the advice-seeking situation have been examined in numerous sociological contexts, group processes has largely remained silent about the matter since the classic statements that used the social exchange framework. A relevant exception is the research by Gallagher and colleagues (2005), where they applied SCT to understand asymmetries in the medical encounter. They used voice modulation to detect the presence of a power and prestige order during the medical encounter, and found that asymmetry peaks during the diagnostic phases of the interview (i.e., when the scope conditions of the theory are met). Because both status and role-identities are likely salient in this situation, it is difficult to disentangle their marginal and joint effects on interaction. My objective with this research paper is to demonstrate such an analysis of these joint effects, by adjusting aspects of the standardized experimental setting in SCT.

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[1]There are certainly other instances in which the advice-seeking situation is either explicitly or implicitly characterized as a context occurring among peers or friends (e.g., McDonald and Westphal 2003). In such instances, it is likely that both the advice-seeker and advice-provider share similarities in regards to status and role-identities (e.g., McPherson and Smith-Lovin 1987), therefore making a discussion of prestige hierarchies irrelevant. For the current objective of advancing our knowledge about how status and role-identities contribute together to shape trust and influence in the advice-seeking situation, I focus only on situations where prestige hierarchies are likely at play.

Incremental adjustments to a standardized setting like those I present here contribute to theoretical advancements (Troyer 2002).

Status Characteristics Theory

I will be extending SCT (Berger et al. 1977) to understand the dynamics of the advice-seeking situation. The theory explains the formation of task performance expectations among members of groups that are both task- and collectively oriented. Task-orientation involves group members' motivation to engage primarily in activity to achieve a successful outcome in a discrete task. Collective orientation is the belief on the part of individuals that it is both legitimate and crucial for them to take one another's behaviors and opinions into account for success.

Group members (non-consciously) use salient attributes – those that differentiate group members – to form task performance expectations. Salient attributes can be directly related to beliefs about actual task ability (e.g., differences in math ability while working on word problems), but they can also be indirectly related. When the salient attributes are distinctions based on social characteristics and these characteristics have at least two states that can be ordered according to the cultural value of each state, we refer to these as diffuse status characteristics (Berger et al. 1977). Examples of diffuse status characteristics include gender (Ridgeway 2011), race (Cohen and Roper 1972), education (Moore 1968), and beauty (Webster and Driskell 1983). Group members who possess more valued states hold higher status in the group than those who possess the less valued states. For example, race is a differentially valued characteristic in our culture; European Americans are generally valued more so than those from other races (Cohen and Roper 1972). Gender is also a differentially valued characteristic in our culture, with men generally valued more than women (Ridgeway 2011). In task groups, members will tend to (non-consciously) infer greater task ability for high status members than low status members and thus accept more influence attempts from a high status rather than a low status member (Berger et al. 1977). Consequently, the group's expectation for a given

member's task performance can be contingent on the member's status vis-à-vis other group members rather than an attribute at the person-level.

Role-Identity

In addition to expectations based on status characteristics governing group behavior, there can exist in the advice-seeking situation expectations that arise from role-identities, though these two processes have yet to be examined simultaneously. An actor's role-identity is the meanings held for a role associated with a position in a network of relationships (Stryker 1980). The role of mother, for example, is a position in a network with ties to network alters like child, teacher, and pediatrician. The constellation of meanings held for this role, like "nurturing" and "caring," is what is referred to as the role-identity.

Both role-identity theory and SCT share a concern for similar concepts, task performance expectations. Roles, more generally, refer to expectations about behaviors for oneself and alter(s) in a particular context (Turner 1956). During the division of labor to complete a task, role differentiation occurs based on knowledge and skills associated with the task itself (Turner 2001). SCT and other theories in the Expectation States Research Program are interrelated in that they share a concern for explaining precursors to and outcomes of expectations for task performance given the scope conditions outlined previously. Because this latter focus on expectations is narrower than the former, I restrict the analysis to those roles that carry with them normative expectations about task performance.

Positions in a social structure such as a network often have roles attached to them, which are the expectations for rights and responsibilities tied to the position (Merton 1957). What defines the expectations is the set of relationships with alters in a network (Borgatti and Everett 1992); that is, those who play the counter roles locally. For example, in the case of the role of a physician, his or her relationships with alters like nurse practitioners, patients, pharmacists, and office assistants form the basis for the

physician's expectations. The presence of other physicians too can conjure up expectations for a particular physician, but these expectations are different from those defined when a patient is present. The latter situation is the advice-seeking situation and implies a situation where task competency is directly linked to the goal of the situation.

Certain roles have constraints surrounding them that force them to hold equal meanings across settings, thus constraining the role-identities themselves. Occupational roles, for example, are sometimes professionalized in a manner that creates homogeneity in the expected behavior of the possessors of these roles, often leading to a spread of similar norms, attitudes, and values in the organizations to which the professionals are tied (DiMaggio and Powell 1983). As such, we would expect to see similarities across all professionals and clients embedded in similarly structured situations. For example, physicians are generally expected to act in the interest of their patients (Anderson and Dedrick 1990; Mechanic 1996, 1998) and lawyers are generally expected to provide vindication and legal protection (Sarat 1991). These roles provide a useful bridge into SCT because the role expectations include expectations for task performance[2] when counter-roles are enacted. Moreover, the two are compatible in that they focus on the relational context to explain qualities perceived of and exhibited by actors, such as trust and trustworthiness. Both roles and status characteristics will be useful for moving away from a strictly individual-level view of trustworthiness.

Trust and Trustworthiness

Trust is a willingness to be vulnerable to the actions of another person (Mayer et al. 1995), while a person's trustworthiness is a belief that relying on this person's actions will minimize vulnerability. These are different from generalized trust, which is trust

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[2] Other role identities, such as "husband" and "wife," also carry similar task performance expectations (e.g., the division and execution of household labor), but the substrate of these expectations is often the relative prestige of the occupational roles held by the spouses (Shelton and John 1996).

with a "generalized other" (in Mead's [1934] sense). Generalized trust is often captured with questions like, "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" The potential trustee is not specified, but instead is meant to be depicted as an abstract person in the general locale, a so-called "faceless" situation (Giddens 1990).

The benefits of trust are highlighted in numerous literatures. At the firm-level, trust is important because it can minimize transaction costs (Williamson 1981) and increase cooperation in partner alliances (Das and Teng 1998). Without trust, monitoring behavior increases (Bradach and Eccles 1989; McAllister 1995; Williamson 1981) and contracts become more complex (Gulati 1995; Macaulay 1963). Interpersonal relationships can also benefit from trust because it increases many behaviors that reinforce commitment like self-disclosure (Altman and Taylor 1973; Wheeless and Grotz 1977) and cooperation (McAllister 1995).

Less information is available regarding the downside of trust. A few have explicitly examined the downside of trust using empirical research (e.g., Langfred 2004), and others have pointed out the necessity to understand its disadvantages (e.g., Hardin 2002). When signing a mortgage, for example, low levels of trust and high skepticism may actually be beneficial to one's own outcomes in the transaction. A high level of trust that is unwarranted (such as neglecting to read the fine print of a contract) is referred to as "over-trust," while a low level of trust that is unwarranted (such as refusing the advice of a benevolent financial adviser) is referred to as "under-trust." With the exception of the literature on automation (e.g., Lee and See 2004), very little research has been undertaken to approximate when over- and under-trusting occurs. For the advice-seeking group situation, I focus on examining perceived trustworthiness based on relational cues that stem from status characteristics and role-identities. Doing so will shed light on over- and under-trusting behavior as well as demonstrate that perceived trustworthiness is tied to the relational context.

Theory

I begin by formalizing the scope conditions of the theory, using the scope conditions of SCT as a starting point. Recall that the scope conditions of SCT states that group members are both task- and collectively oriented. The scope condition of collective orientation has received more attention in the literature than task-orientation. For one, groups can move in and out of a state of task orientation while remaining collectively oriented (Gallagher et al. 2005). Kalkhoff and Barnum (2000) point out that there is nothing about the scope condition that disallows the presence of subgroups or even competition among the subgroups; subgroups in competition can still be collectively oriented. Of particular relevance to the current discussion is Meeker's (1990) point that cooperative orientation is not a state that is necessary to meet this scope condition. In other words, the goal that guides member activity need not be applicable to all members, a condition that pertains precisely to the advice-seeking situation where the goal is to assist in the situation of an individual member.

Scope Conditions: Group members are task- and collectively oriented to assist an individual member.

I will be making the assumption that because the above stated scope condition describes a specific class of situations within the scope conditions of SCT, then the relevant assumptions of SCT are still applicable. In other words, the advice-seeking situation is a specific instance of SCT's conceptualization of task- and collectively oriented groups. Specific instances of concepts do not always share properties with those concepts (Medin 1989); a "penguin" does not share every property (e.g., the ability to fly) associated with the superordinate concept, the "bird." Thus, it is integral that this specific instance of SCT's scope condition be explicitly examined empirically.

SCT states that under the given scope conditions, observable behavioral inequalities in the group emerge as a result of differential performance expectations. Specifically, members who are expected to perform better at the task than others are

given more action opportunities, rated higher for their performance, perform more actions, and have more influence over group decisions than other members who are not expected to perform as well. As described earlier, according to SCT, diffuse status characteristics that are salient can influence the formation of these performance expectations through the creation of a status differential. In advice-seeking situations involving a professional and client, it is very likely that the advice-seeker and the advice-provider are differentiated on a diffuse status like race or gender. For example, currently the physician workforce is composed primarily of European American men (Cohen and Steinecke 2006), making diffuse statuses likely salient during the medical encounter.

> Proposition 1: Salient diffuse status characteristics between an actor P and another actor O will increase the likelihood that a status differential will exist between P and O.

Attached to some role-identities are status expectations that also shape interaction. As described previously, I focus on those role-identities attached to occupations because they carry with them expectations for task performance. It is well documented in the literature that occupational titles can be organized according to a prestige hierarchy (Berger et al. 1977). Research has found that the occupational hierarchy within organizational settings – a psychiatric hospital (Caudill 1958; Skvoretz 1981), flight crews (Torrance 1954), and R & D teams (Cohen and Zhou 1991), for example – determined participation rates in group discussions. More generally, societies view occupational titles as a signal of achievement and confer status based on this achievement (Blau and Duncan 1967; see Zhou 2005 for a different perspective). However, it is specifically in situations where a role-identity's concomitant counter-role is enacted where we would see differences in expectations about task performance. Roles are generally a part of a set that describes their distinct role relationships (Turner 2001). When roles enacted are not part of a set, but instead occur between role incumbents (e.g, lawyer-lawyer), we can refer to these interactions as occurring between status equals.

Enactment of one of these role-identities implies that it is near the top of the salience hierarchy described earlier. Thus, both SCT and role-identity theory require that information (status characteristics or role-identities) be salient to guide interaction. When an occupier of an occupational role interacts (ego) with his or her counter-role (alter) and the scope condition is met, then a status difference will emerge. An example of this is seen in the aforementioned voice modulation data of physicians making medical decisions with patients (Gallagher et al. 2005).

> Proposition 2: If an actor P enacts a role-identity and another actor O enacts a counter-role-identity in a situation (where this situation falls within the scope condition stated previously) AND the role-identities can be organized in a prestige hierarchy, then a status differential is likely to exist between P and O.

Salient role-identities and diffuse status characteristics in this case serve as status information that can be combined to organize interaction. The way they combine is likely to follow the same method in which other status information combines, the principle of organized subsets combining (Berger et al. 1992). Status information for P can either be positively valued or negatively valued, with those pieces of information where P possesses the most prestigious state (e.g., P is a man interacting with a woman) being positive and those where P possesses the least prestigious state (e.g., P is a patient interacting with a physician) being negative. All positively valued status information about P is sorted into a subset and all negatively valued information is sorted into a separate subset. Each additional piece of information added to any given subset follows a principle of diminishing returns (i.e., when the amount of information is large, additional pieces of information have a smaller effect on the entire value of the subset). The value of the negative subset is subtracted from the value of the positive subset, and this is used to determine the size and direction of the status differential (i.e., the relative status of the individuals). Prior research (Berger et al. 1992) confirms that actors behave as if this principle is operating (i.e., it is not a conscious process). Thus, when an actor P is

consistently high on two salient status elements (e.g., P is a male physician and O is a female patient), the status differential with their partner is greater than when the actor is high on only one salient status element (e.g., P is male and O is female). The size and direction of the differential will influence the inequalities in the action opportunities described earlier; a person high on two salient status elements will receive many more action opportunities than a person high on only one salient status element.

> Proposition 3: The status information available from the salient diffuse status characteristics and the role-identities will combine in a manner that is consistent with the principle of organized subsets combining to determine the size and direction of the status differential.

To properly understand the relationship between status and trust, I will explicate why perceivers might infer trustworthiness based on status differences. In certain situations, salient categories used for interpersonal classification can (non-consciously) lead to differential attributions of prestige and task competence. When actors are in a task- and collectively oriented group, status characteristics that distinguish group members are often used to infer expectations for task performance (see Berger et al. 1992 for path diagrams demonstrating this link). While the bulk of the research in this area has focused on the inference of performance expectations, other inferences have also been identified that result from status differences including perceptions of being benevolent toward the group (Ridgeway 1982) and integrity in actions, resulting in giving the "benefit of the doubt" to high ranking members (Foschi 2000; Howard and Pike 1986). Put differently, these three qualities comprise a cluster of behaviors thought to be consistently associated with a particular role (Turner 2001), in this case one's role attached to a position in a status hierarchy.

> Proposition 4: If O is higher (lower) in status than P, then P will perceive O as possessing more (less) benevolence, (less) integrity, and (less) competence than P.

Trust and trustworthiness are forward-looking, in that they are based on expectations about future behavior. Handing over your wallet full of cash to a friend, for example, implies that you believe that in the future your friend will not steal that cash. We often rely on the past to form these expectations about the future. We tend to trust others with whom we have exchanged in the past (Gulati 1995; Gulati and Gargiulo 1999) and those with good reputations (King-Casas et al. 2005; Kollock 1994). Sometimes however, we have no information about the potential trustee's past and will instead make inferences based on salient attributes in the situation. We instantaneously categorize ourselves and others (Brewer 1988; Fiske and Neuberg 1990), and these categories can provide signaling information on how and when to trust (Gambetta and Hamill 2005; McAllister 1995).

The three factors aforementioned that group members (non-consciously) assume to be related to status are precisely the three factors that are commonly associated with perceptions of trustworthiness (Mayer et al. 2001). Fiduciary trust (trust in a professional-client relationship), for example, is often predicated on the expertise of the professional (Lieberman 1981). Making a dispositional attribution for another's cooperation implies that we believe the other is genuinely benevolent as opposed to simply following expectations of the situation (Malhotra and Murnighan 2002). Finally, Williamson (1981) highlighted the importance of information about past behavior to infer reliability and reduce uncertainty.

Proposition 5: If P perceives O as possessing more (less) benevolence, integrity, and competence than P, then P is more (less) likely to believe O is trustworthy.

When the source of information is deemed trustworthy, individuals are more likely to trust and be influenced by the source. This is a central tenet in many psychological theories of influence and persuasion, including Petty and Cacioppo's (1986) elaboration likelihood model. In addition, this claim is consistent with research from SCT that demonstrates that the perception of task competence leads to the more

frequent acceptance of influence attempts (Berger et al. 1977). Worded differently, when we accept an influence attempt by another actor, we are placing trust in that actor's judgment.

> Proposition 6: If P perceives O as possessing more (less) trustworthy than P, then P is more (less) likely to accept O's influence.

Finally, when the status differential is composed of a role-identity, the level of commitment to the role-identity can moderate the proposed relationships. The self in identity theory is seen as composed of a role-identity hierarchy, with those identities that receive greater commitment and salience on top of the hierarchy (Stryker 1980). Commitment in identity theory has both a quantitative and a qualitative dimension (Stryker and Serpe 1994). The quantitative dimension reflects an individual's ties to the social structure and is translated into the number of persons to which one is tied as a consequence of holding the identity. The number of ties is positively associated with identity commitment. The qualitative dimension is captured by the affective strength of the ties to others, with greater strength leading to a stronger commitment to the identity. Greater commitment to the identity increases its salience, where saliency here refers to the probability of an identity being activated within a situation and used as a guide for behavior.

> Proposition 7: P's commitment to the enacted role-identity will act as a moderator of the relationships between the status differential between P and O and the perceived trustworthiness of O.

The outlined theory makes connections between status, roles, and trust, linkages that have not been previously formalized. One interesting deduction from the theory is that it predicts when actors will place inappropriate amounts of trust (over- and under-trust) on another actor. Assume for a moment that the knowledge advice-givers hold about the problem at hand is constant across all advice-givers. Assume further that other variables that shape perceptions of trustworthiness are also constant across all advice-

givers. In situations where actors are equal in diffuse status characteristics and role-identities that can be organized into a prestige hierarchy are absent, an advice-seeker's perception of trustworthiness will be directly related to the knowledge of any advice-giver, what we might call an appropriate level of trust. When there are salient distinctions on diffuse status characteristics or role-identities are present with associated prestige hierarchies, inappropriate levels of trust can arise. Specifically, in instances where the advice-giver possesses more (less) positively-valued traits than the advice-seeker, the advice-seeker will over-trust (under-trust) the advice-giver.

These propositions, more broadly, push forward our knowledge of trust not always being completely beneficial to social relationships. Specific to the advice-seeking situation, this has implications for how well the advice-seeker can use the information from the advice-giver to improve his or her situation. In the instances where there is under-trusting, the advice-seeker is not likely to make use of the expert knowledge of the advice-giver and more likely to question or even ignore it. As an example, if a patient is under-trusting a medical provider, then this could lead to that patient not adhering to the prescribed self-management regiment. When there is over-trusting, the advice-seeker is likely to give the benefit of the doubt to the advice-giver in instances where the information provided may not be completely accurate. Returning to the patient situation, a medical provider could prescribe a medication to the patient. While taking the medication, the patient may experience adverse side effects such as excessive vomiting. If the patient is over-trusting the medical provider, he or she may not think it appropriate to follow-up with the provider to receive an updated opinion for the recourse of treatment.

I conducted a two-phase laboratory experiment designed to test one instance of this theory. Future research examining other instances in a variety of settings that fall within the scope condition will provide information on the generalizability of the theory

(Lucas 2003). I reserve stating falsifiable hypotheses until the end of the experiment description to assist with readability.

An objective of this dissertation is to extend our knowledge of SCT into the domain of the advice-seeking situation, where both status and role-identities are at play. As such, I modified the standardized experimental setting commonly used in SCT research (Berger 2007) in that I told research participants that the goal of the study was to help a single group member (always the participant) perform well on a task. The goal of Phase 1 was to test how well SCT explains patterns of trust and influence in the advice-seeking situation. In Phase 2, I tested to see how well predictions based on SCT fit the data when role-identities are introduced to the group setting. All procedures took place at the University of Iowa's Center for the Study of Group Processes.

Phase One

I examined one factor, diffuse status, with three treatment levels (low, equal, high). The study lasted one-hour and participants were compensated $10.00 for their time. In all three conditions, participants were informed that the group goal is to work together so that one group member (always the participant) can achieve the highest score possible on the task (described momentarily). These instructions are different from what is customarily used in SCT research (Berger 2007), but necessary to examine if the assumptions of the theory apply to the advice-seeking situation. The condition where diffuse status is equal serves as a baseline condition that can be used to compare results with prior research that uses the customary instructions, a step beneficial for theoretical development (Troyer 2002). I used Balkwell's (1991) translation function, a function that mathematically links status advantages to the measurable behavioral inequalities in a group, to examine how well the assumptions of SCT fit these data.

Participants were undergraduate students from a large, Midwestern university. I randomly assigned 75 research participants to one of the three conditions, for a total of 25 participants in each condition. A power test set at 80% power with effect size garnered

from previous studies of status and influence (Lenth 2001) demonstrated that 25 participants per condition were needed.

Upon providing consent, participants were seated at a computer station in a small lab room and completed a computer-administered pre-test questionnaire (measures described below). Participants then learned about their "partner," who was in fact a computer-controlled agent, located in another lab room. Participants were informed via a video played on the computer that they and their partner were going to complete the "Team Contrast Sensitivity Test" (Berger 2007), a task used in the majority of the SCT research. The task is a supposed test of the ability to detect the degree of difference in the amount of black and white within a checkered image. Participants were lead to believe that each checkered image contains either more black or more white when in fact each image contains approximately the same amount of both colors. The indeterminate nature of the task creates uncertainty that fosters trust (Kollock 1994) and captures the uncertainty inherent in many advice-seeking situations, like diagnosing a disorder (Mechanic 1998).

After the introduction, participants completed the "Team Contrast Sensitivity Test." For each of 23 rounds, the program presented the participant with two checkered images for five seconds and asked the participant to make an initial decision regarding which of the two images contained the greatest area of white. The number of rounds is similar to that used in previous studies (Berger 2007). Participants then learned what their partner decided and were given an opportunity to make a final decision. In twenty of these rounds, the participants learned that their partner selected the opposite image for the initial choice, creating an opportunity for the participant to either adhere to their partner's choice or stay with their own initial choice. At the end of the 23 rounds, all participants completed a computer-administered post-test questionnaire. Measures are described below.

Status Manipulation

Table 2.1 summarizes the conditions and the participant's status relative to the partner and Figure 2.1 shows the graph associated with each of the three conditions when we assume that status characteristics aggregate in the advice-seeking situation just as they do in the group settings historically researched in the SCT tradition. The diffuse status characteristic that I varied is gender, where the male state is generally regarded as more prestigious than the female state (Ridgeway 2011). I assigned female participants to the low and equal status conditions and male participants for the high status conditions. In the low status conditions the female participants learned that their partner was male and in the equal status conditions they learned that their partner was female. In the high status conditions the male participants learned that their partner was female. The equal status condition could be completed with either males or females matched on gender, because prior research has shown that all-male and all-female groups are equally likely to form prestige hierarchies (Walker et al. 1996). Future research might confirm that this continues to be the case in the advice-seeking setting described here. I chose to invite female participants for this condition because they have, more so than males, preferred historically to participate in research at the university from which data were collected.

Measures

One benefit of drawing on a standardized experimental setting is that it provides measures that have been rigorously tested through prior research.

Manipulation Checks

Two measures were used to assess the extent to which participants fall within the stated scope conditions of the advice-seeking situation: 1) How important was it for them to perform well on the task; and 2) How important was it for them to take into consideration the contributions of others.

Influence

The measure of one of the dependent variables of interest, influence, came from the standardized experimental setting. Influence in the SCT tradition is customarily measured using the proportion of stay responses during critical trials (i.e., the twenty trials where the partner disagrees with the participant), referred to as the P(S) score. The measure ranges from 0 to 1, with small values indicating that the participant was more accepting of the discrepant information provided by the partner and large values pointing to more rejection of this information.

Trustworthiness

I asked participants to respond on a Likert scale regarding the perceived trustworthiness of their partner. This measure is similar to other studies that have gauged perceived trustworthiness (e.g., Kollock 1994). I developed measures to gauge the extent to which status differences influence the three factors that determine trustworthiness (competence, benevolence, and integrity). I asked participants to report their perceptions of their partners' competence on a 7-point Likert scale (using terms such as "knowledgeable," "skillful," and "competent"), benevolence (using phrases such as "group-oriented, not self-interested" "putting team goals ahead of personal goals," and "concern for the team members), and integrity (using terms such as "reliable," "dependable," and "consistent") during the team task. Lastly, because uncertainty and risk are related to trust, I included 7-point Likert scales that asked participants to estimate how much uncertainty and risk (Kollock 1994; Molm et al. 2000) was apparent while solving the task with their partner.

Hypotheses

H_1: Trust in the partner will be greater in the low status conditions than in the equal and high status conditions (i.e., a main effect of status on trust).

H_2: The ordering of the P(S) score for the three conditions will be as follows: high status > equal status > low status (i.e., a main effect of status on influence).

H_3: The perception of the partner's trustworthiness will be mediated by the participant's perception of their partner's competence, benevolence, and integrity.

Results

Test of Hypothesis 1

The means and standard deviations for the trust measures are summarized in Table 2.2. Not pictured are the three factors that shape perceived trustworthiness (benevolence, competence, and integrity); they are statistically similar across the three experimental conditions. The perceived trustworthiness of the partner is lowest among participants in condition 3, the high status condition. A one-tailed t-test shows that the mean in this condition (M = 3.48, SD = 1.16) is only statistically different from the mean in condition 2 (M = 4.08, SD = 1.00), $t(48) = 1.96$, $p < .05$. The means in condition 1 and condition 2 are statistically similar to one another.

Prior research on trust and trustworthiness in the social exchange framework has shown that trust has a positive association with risk and uncertainty (Kollock 1994; Molm et al. 2000). The mean perceived uncertainty of solving the task with the partner is essentially the same across all three conditions. The mean perceived risk of solving the task with the partner is lowest among participants in condition 3. A one-tailed t-test shows that participants in condition 3 perceived less risk (M = 1.88, SD = 1.39) than those in condition 1 (M = 2.92, SD = 1.61) and condition 2 (M = 3.08, SD = 1.68), 1 vs. 3: $t(48) = 2.45$, $p < .001$ 2 vs. 3: $t(48) = 2.75$, $p < .001$. These findings suggest that in task- and collectively oriented settings, the relationships among these variables differ from those seen in the settings studied in the social exchange framework. The latter setting emphasizes competition for resources, whereas the former emphasizes cooperation. While Meeker's (1990) and Kalkhoff and Barnum (2000) suggest that SCT still applies to competitive situations, the underlying processes that shape the emergence of trust are likely different, which I explain further in the discussion section.

Test of Hypothesis 2

The means and standard deviations of *P(s)* values for the three experimental conditions are summarized in Table 2.3. The highest mean for *P(s)* occurs in condition 3, followed by conditions 2 and 1. A Jonckheere–Terpstra non-parametric test for ordered independent conditions (Jonckheere 1954), however, shows that the order predicted in Hypothesis 2 was not better than a null hypothesis ($p = .289$). The differences between the conditions are not large enough to be detected by the test, perhaps because the advice-seeking situation is acting as a moderator of how status differentials affect *P(s)*.

The translation function (Balkwell 1991) that relates expectation advantage to *P(s)* is: $P(s) = m + q(e_p - e_o)$. The expectation advantage of P over O is captured in the quantity, $e_p - e_o$, and can be estimated using the graph-theoretic approach of SCT (Berger et al. 1977). When P is higher status than O the quantity is positive, whereas when P is lower status than O the quantity is negative. The constant, *m*, is a baseline estimate of the proportion of stay responses for a particular population in the absence of an expectation advantage (i.e., $e_p - e_o = 0$). The parameter, *q*, adjusts the relationship between the expectation advantage and stay responses based on the situation.

I used the above equation to estimate *m* and *q* for these data and then conducted tests of model fit, which are summarized in Table 2.4. I assumed that status characteristics in the advice-seeking situation aggregated in the same way as in prior research that used the standardized experimental setting. Using the graph analysis (Berger et al. 1977) shown in Figure 2.1, the expectation advantage ($e_p - e_o$) is -.365 for the low status condition, zero for the equal status condition, and .365 for the high status condition. I generated a new variable to record the appropriate expectation advantage for each participant, based on the assigned experimental condition. I then used this expectation advantage variable as an independent variable in an ordinary least squares regression to estimate the best *m* (.611) and *q* (-.041) that summarized these data when we assume that aggregation of status characteristics occurs as in prior research on SCT.

The chi-square test tells us how well these best estimates for *m* and *q* actually fit the observed data for *P(s)*. With the estimates for *m*, *q*, and the status differentials ($e_p - e_o$) based on aggregation, I used the translation function to calculate predicted values for *P(s)*. The differences between the observed and predicted values inform us of how well predictions based on SCT fit the data from the advice-seeking situation. Large deviations between observed and predicted values increase the size of the chi-square test statistic and the probability that it will be statistically significant from the critical value. The chi-square test was not statistically significant ($\chi^2 = .208$, $df = 1$, $p = .648$), suggesting that the aggregation of status characteristics in the advice-seeking situation follows a pattern similar to that recorded in prior research on SCT. Finally, I examined the proportional error reduction in chi-square, G^2, produced by using the customary aggregation model of SCT to predict the mean *P(s)* for each condition as opposed to simply using the global mean from all three conditions (Fişek, Berger, and Moore 2002) . G^2 can range from 0 to 1, with values closer to 1 indicating the greatest proportional error reduction. The G^2 associated with these data is .932, indicating that chi-square was greatly reduced using the aggregation model over simply the global mean.

Phase Two

The task, status manipulation, and group situation of Phase 2 was the same as in Phase 1. What is different between the two phases is that in Phase 2, I introduced role expectations and added measures in the post-session questionnaire that mirrored those used in role-identity studies for manipulation checks.

Role Expectations Manipulation

Prior to the team task, the participants watched a video on the computer screen that described "diagnosers" as being expected to provide unbiased and truthful advice to help diagnose problems such as those presented in the "Contrast Sensitivity" task. Their role is to help "decision-makers" reach the highest score possible on the task and are generally considered more prestigious than this counterpart (mimicking an occupational

prestige structure). Participants also learned that "decision-makers" are tasked with taking in all relevant information and making the final decision that will affect their score (i.e., the group outcome). Participants were always assigned the role of the "decision-maker" and their partners the "diagnosers," a decision purportedly the result of a random process. In this situation, the agency and ultimate responsibility is placed on the participant to achieve the highest score possible, corresponding to a person seeking the advice of another to improve his or her situation.

The summary of the three conditions for Phase 2 is shown in Table 2.5. The graph summary of the status situation in the conditions is shown in Figure 2.2. For the graph analysis, I treated role-identities as diffuse status characteristics. Because the results from Phase 1 support the use of an aggregation model for status characteristics in the advice-seeking situation, the calculated status differentials are similar to those seen in research examining two diffuse status characteristics.

Measures

The measures were the same as in Phase 1, with the addition of a set of questions in the post-session questionnaire that I modified from research in role identity theory (e.g., Stryker and Serpe 1994) to determine the extent to which roles were enacted. I made the assumption that the "decision-maker" role presented during the study is similar to other roles participants have experienced previously and will likely continue to experience (e.g., student, patient). Identity salience was measured by asking participants how likely they will tell a friend or a family member that they were a "decision-maker" in the study. I also asked them how likely they will act as a "decision-maker" in future situations, their preference for being a "decision-maker" if they were to complete the study again, and how similar this role is to other roles they have carried out previously. Interactional commitment was measured by asking them how often they have made friends as a result of behaving as a "decision-maker" and to what extent have they joined organizations as a result of wanting to enact the "decision-maker" role. I measured

affective commitment with questions asking how good they are at carrying out the tasks associated with the role (collecting relevant information and making an informed decision). I also asked how important it is for others (their partner, family, and friends) to view them as a "decision-maker." Lastly, I asked similar questions to determine the extent to which they viewed their partner as a "diagnoser." All of these questions were asked on a 7-point Likert scale.

Hypotheses

H_4: Trust in the partner will be greater in the low status conditions than in the equal and high status conditions (i.e., a main effect of status on trust).

H_5: The partner's influence over the participant will be greater in the low status conditions than in the equal and high status conditions (i.e., a main effect of status on influence).

H_6: These hypothesized relationships will be moderated by the extent to which participant reports that the "decision-making" role and the counter-role, "diagnoser," were enacted.

H_7: The perception of the partner's trustworthiness will be mediated by the participant's perception of their partner's competence, benevolence, and integrity.

Results

Test of Hypothesis 4

The descriptives for the trust measures are in Table 2.6. As in Phase 1, the highest mean level of perceived trustworthiness of partner was found among research participants in condition 1. The only significant difference, based on a one-tailed t-test, is that for the means of perceived trustworthiness between condition 1 (M = 4.48, SD = 1.53) and 2 (M = 3.80, SD = 1.08), $t(48) = 1.81$, $p < .05$. None of the other measures shown have significant mean differences between conditions, including those not shown for the three factors associated with perceived trustworthiness (competence, benevolence, and integrity).

Test of Hypothesis 5

The means and standard deviations are summarized in Table 2.7. The means are not ordered by the level of the independent variable, which makes it inappropriate to use the Jonckheere–Terpstra test as in Phase 1. I conducted a model fit test, just as I did for Phase 1, to assess the extent that role-identities behaved as a diffuse status characteristic and aggregated with the gender diffuse status characteristic. If we treat the role-identities, "decision-maker" and "diagnoser" as a diffuse status characteristic, then the expectation advantage ($e_p - e_o$) for the conditions 1 through 3 are, .664, .365, and .000, respectively. The best *m* and *q* that fit these data are .599 and -.019, respectively. A comparison of the observed and predicted *P(s)* values is shown in Table 2.8, along with the accompanying results of the model fit test.

The chi-square test shows that if we assume an aggregation model where the role-identities are treated as other diffuse status characteristics, there is a poor fit to these data ($\chi^2 = 7.507$, $df = 1$, $p = .006$). The G^2 for these data is .143, indicating that using the customary aggregation model to estimate the mean *P(s)* for each condition was not substantially much better than simply using the global mean from all three conditions.

Discussion

Previous experimental research in the SCT tradition focused on task groups working toward a goal that was equally shared among group members. The results of the two laboratory experiments I reported here demonstrate that the predictions of SCT apply to a task group setting where the goal is to help a single group member perform well on a task. I abstracted the basic characteristics of advice-seeking situations, such as the clinical interview between a patient and medical provider, to design the experimental setting. The findings in these data uncover previously-unknown processes and also point to future avenues of research in the areas of the advice-seeking situation and trustworthiness in general.

A closer look at the estimated parameters for Balkwell's (1991) translation function suggests that, while Berger et al.'s (1977) graph-theoretic formulation of how status characteristics aggregate to shape task *P(s)* fits the data from Phase 1 well, the advice-seeking situation likely acts as a moderator in the process. The estimate for *q* is smaller than that obtained by researchers in SCT studies published recently that use the customary group goal instructions (e.g., Kalkhoff, Younts, and Troyer 2008; Kalkhoff, Younts, and Troyer 2011; Webster, Whitmeyer, and Rashotte 2004; Webster and Rashotte 2010). Moreover, the sign of the parameter is negative, which reflects that the advice-seeking situation attenuates the affect of the research participant's expectation advantage over the partner on the rejection of the partner's influence attempts. Additional research is needed to firmly support the claim that attenuation is occurring. A test that randomly assigns research participants to either the advice-seeking situation or the common group situation used in this line of research would provide solid evidence for the moderation effect. In such a test, if the advice-seeking situation were a moderator of the effect of the status advantage on patterns of influence, we would find a significant interaction between *q* and the group setting.

Less clear is how role identities shape influence and trustworthiness in these settings. I proposed that a role identity that has salient competency expectations when the counter role was enacted would aggregate with status information as if it were a diffuse status characteristic. When I applied the translation function on the observed *P*(s) scores in Phase 2 with this assumption, the function did not fit the data well. It appears that the role identities that I manipulated here acted as a moderator of the effect of the status advantage on *P*(s). The manipulation involved the random assignment of these role identities, which may not have been enough to make competency expectations salient. Perhaps if the assignment occurred through a more legitimate source (Walker, Thomas, and Zelditch 1986), the role identities would have aggregated with the other salient status elements. Alternatively, future research might differentially associate the

role identities with other status valued elements or rewards (Berger and Fişek 2006; Ridgeway 2001).

The findings in this chapter shed light on the under-theorized relationship between status and trustworthiness. The predicted association between the research participant's status relative to the partner and the participant's perception of the partner's trustworthiness was found, but it was not mediated by the three factors (competence, integrity, and benevolence) that shape perceived trustworthiness. The perceived benevolence of the partner was associated with the trustworthiness of the partner, but benevolence was not associated with the participant's status relative to the partner. The absence of a mediation effect could be because, as mentioned earlier, the advice-seeking situation is likely attenuating status differences. Future tests investigating the processes by which status shapes perceptions of trustworthiness should examine situations where the expectation advantage between a status differentiated trustor and trustee is greater than those studied here.

The finding that the perceived benevolence of the partner was significantly associated with the perceived trustworthiness of the partner is in contrast to previous research that unpacks the effects of status on trustworthiness (Campos-Castillo and Ewoodzie 2012). The previous research showed that the perceived competency of a target actor mediated the association between the actor's status and trustworthiness. The goal situation of this previous research mirrored that seen in the bulk of SCT research; that is, the outcome of the task was to be equally shared among group members. It could be that the advice-seeking situation makes certain substrates of trustworthiness more salient than in other group situations. Prior research on patient trust in medical providers, for example, demonstrates that patients tend to equate a provider's benevolence with competence (Hall et al. 2002). The results from the laboratory studies reported here point to the possibility that this may occur in other advice-seeing situations. Taken together, the early conclusion is that we are seeing an interesting finding never documented before,

which is that the features of a trustee that are important for trust are contingent on the situational goals.

The associations found in these data are bounded by the features of the situation. I designed the experimental setting described here to begin to approximate one subset of the advice-seeking situation, but it certainly does not approximate all instances. Not all advice-seeking situations are created equal. The meanings surrounding an advice-giver such as a medical doctor are distinctly different from those that surround an automobile mechanic. For instance, the medical profession (as described earlier) enjoys a level of prestige over many other occupations. The administrative bureaucracy in which a medical doctor is embedded also differs from that of a mechanic. The marketplace for both also varies with respect to how constrained the advice-seeker is in choosing an advice-giver. These differences point to important moderating variables to consider in adaptations for future research. The experimental setting is amenable to adaptations that will extend our knowledge of the advice-seeking situation.

At least two additional features of the experimental setting are known to be associated with trust and trustworthiness, which I will demonstrate can be used to modify the setting in future extensions of this research. First, the dyads included in this research are zero-history, with no expectation for future interaction. The lack of history, or the "shadow of the past," limits the formation of expectations from which to build trust (Granovetter 1985). Expecting future interaction raises the "shadow of the future" and the likelihood of cooperation and trust between parties (Axelrod 1984). Second, how well the task was completed carried very little risk for the research participants, which I mentioned earlier as a precursor to the emergence of trust.

Future research should identify if these two features moderate the association between status and trust in the advice-seeking situation, in particular because there are a subset of these situations that fall outside of these bounds. Much of the survey research on patient trust in a provider, for example, is conducted with patients who identify a

regular source of care, as is the case in the data used in Chapter 3. Investigating these two features as moderators can be completed easily in a controlled laboratory setting as both relationship history and risk have both been examined in previous studies. For example, researchers have assessed effects of relationship history by varying whether participants are paired with a friend or stranger (e.g., Christenfeld et al. 1997; Stinson and Ickes 1992). One extension of the research in this chapter could systematically vary if a partner were a friend or a stranger to assess the role of relationship history as a moderator. Risk has been conceptualized generally in experiments as the amount of money one is willing to surrender to another (e.g., Berg, Dickhaut, McCabe 1995). Future extensions of the studies reported here could make payments contingent on how well partners work together.

Lastly, the studies summarized here are among the first conducted outside of the social exchange tradition that show how malleable trustworthiness is to the relational context. Studies in the social exchange tradition involve competition, whereas the group setting in these two laboratory experiments involves cooperation. Once again, we see situational variation in the processes that underlie trust. Unlike in the competitive situations social exchange theorists study, risk and uncertainty were not associated with trustworthiness in the advice-seeking situation. However, as mentioned earlier, it could be that the outcome of the task examined here carried very little risk and requires future verification.

Table 2.1 Experimental Conditions for Phase 1 (Roles Absent)

Condition	Gender of Participant	Gender of Partner	Participant's Status
1	Female	Male	Low
2	Female	Female	Equal
3	Male	Female	High

Table 2.2 Mean and Standard Deviations for Trust Measures in Phase 1

	Condition					
	1		2		3	
Measure	Mean	SD	Mean	SD	Mean	SD
Trustworthiness	3.72 [a, b]	1.37	4.08 [a]	1.00	3.48 [b]	1.16
Uncertainty	4.60 [a]	1.29	4.28 [a]	1.46	4.48 [a]	1.45
Risk	2.92 [a]	1.61	3.08 [a]	1.68	1.88	1.39

Note: There are 25 participants in each of the three conditions. Means sharing superscripts across rows are not significantly different from one another (t-test, $p < .05$)

Table 2.3 Mean and Standard Deviations of *P(s)* for Experimental Conditions in Phase 1

Condition	Mean *P(s)*	SD
1	.598	.176
2	.606	.170
3	.628	.142

Note: There are 25 participants in each of the three conditions.

Table 2.4 Fit of Aggregation Model to Data from Phase 1

Condition	e_p - e_o	Observed *P(s)*	Predicted *P(s)*	Difference
1	-.365	.598	.596	-.002
2	.000	.606	.611	.005
3	.365	.628	.626	-.002

$P(s) = .611 - .041(e_p - e_o)$, $\chi^2 = .208$, $df = 1$, $p = .648$, $G^2 = .932$

Table 2.5 Experimental Conditions for Phase 2 (Roles Present)

Condition	Gender of Participant	Gender of Partner	Participant's Status Based on Gender and Role-Identity
1	Female	Male	Low
2	Female	Female	Low
3	Male	Female	Equal

Table 2.6 Mean and Standard Deviations for Trust Measures in Phase 2

	Condition					
	1		2		3	
Measure	Mean	SD	Mean	SD	Mean	SD
Trustworthiness	4.48 [a]	1.53	3.80 [b]	1.08	3.96 [a, b]	1.49
Uncertainty	4.44 [a]	.96	4.68 [a]	.80	4.44 [a]	1.50
Risk	2.80 [a]	1.19	2.84 [a]	1.40	2.32 [a]	1.49

Note: There are 25 participants in each of the three conditions. Means sharing superscripts across rows are not significantly different from one another (t-test, $p < .05$).

Table 2.7 Mean and Standard Deviations of *P(s)* for Experimental Conditions in Phase 2

Condition	Mean *P(s)*	SD
1	.602	.188
2	.564	.170
3	.612	.176

Note: There are 25 participants in each of the three conditions.

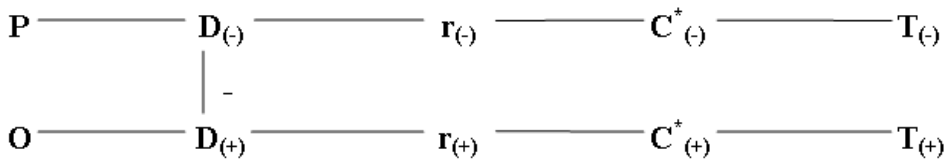
Table 2.8 Fit of Aggregation Model to Data from Phase 2

Condition	e_p - e_o	Observed *P(s)*	Predicted *P(s)*	Difference
1	-.664	.602	.586	-.0160
2	-.365	.564	.592	.0280
3	.000	.612	.599	-.0130

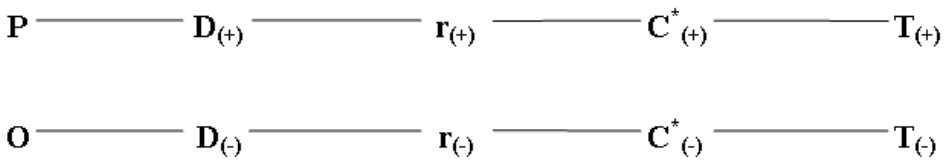
P(s) = .599 - .019(e_p - e_o), χ^2 = 7.507, *df* = 1, *p* = .006, G^2 = .143

Figure 2.1 Path Models for the Status Situations in the Experimental Conditions for Phase 1.

Condition 1: Female Participant, Male Partner (Low Status)



Condition 2: Female Participant, Female Partner (Equal Status)



Condition 3: Male Participant, Female Partner (High Status)

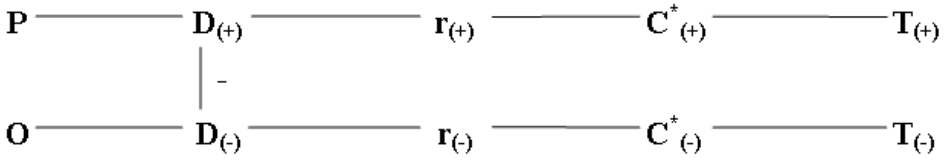
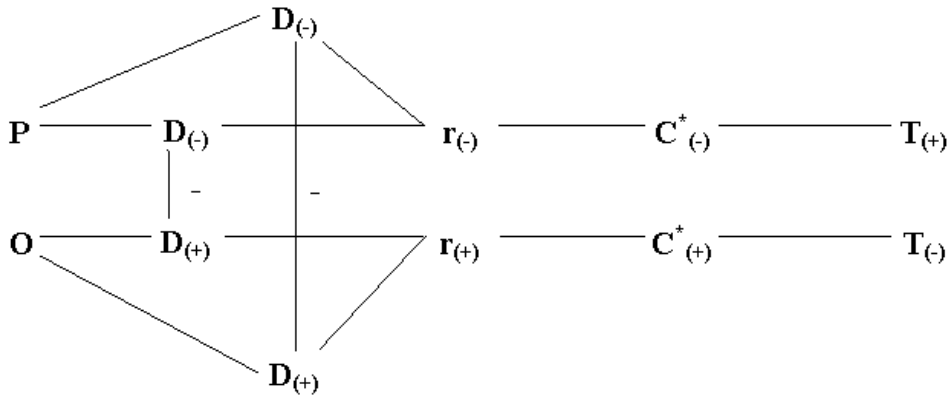
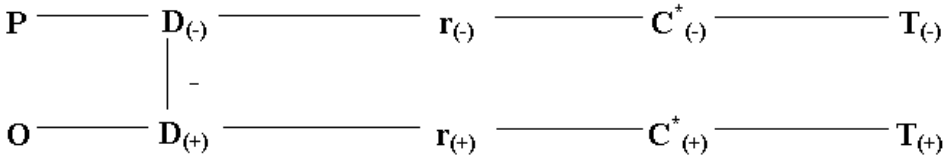


Figure 2.2 Path Models for the Status Situations in the Experimental Conditions for Phase 2.

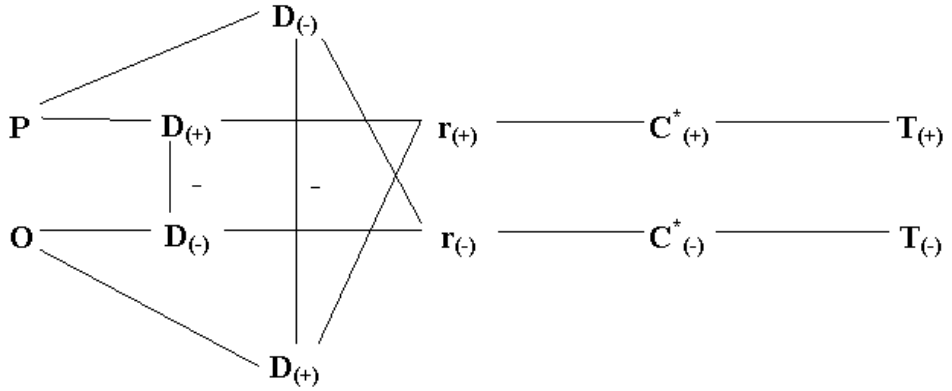
Condition 1: Female Participant, Male Partner



Condition 2: Female Participant, Female Partner



Condition 3: Male Participant, Female Partner



CHAPTER 3: TEST OF THEORY IN SECONDARY ANALYSIS OF SURVEY DATA

Recent explanations for healthcare inequities have centered on the mismatch between a patient and the "prototypical" provider on socially salient characteristics such as gender and race (e.g., Cooper et al. 2003; LaVeist and Nuru-Jeter 2002; Saha, Arbelaez, and Cooper 2003; Schnittker and Liang 2006; Street et al. 2008). Given the structure of the medical profession, the "prototypical" provider in the U.S. is likely to be a European American male (Cohen and Steinecke 2006; but see Boulis and Jacobs 2008 for one account of recent trends) with a doctoral degree in medicine, leaving many patients paired with a provider that is drastically different from them. Moreover, the "prototypical" provider is a carrier of the most esteemed states of four social statuses (race, gender, education, and occupational prestige), creating what some have referred to as a social distance between patient and provider (Balas and McGuire 2001; Malat 2001; Schnittker 2004). When patients and providers are matched on traits, as when the two are race concordant, patients report better healthcare outcomes than when the differences remain. The suggestion from these findings is clear: we need greater diversity in the medical profession to capitalize on the benefits of patient-provider similarities and eradicate healthcare inequalities. Diversifying any occupation exhibiting segregation can be long and difficult to accomplish (Reskin 1993; Reskin, McBrier, and Kmec 1999), suggesting that in the interim we need to develop other solutions to healthcare inequities.

The focus on the current research is to extend these prior findings and develop such a solution. To begin, we need a better understanding of the theoretical framework driving these findings about the importance of concordance. These explanations can be organized based on two different traditions in social psychological theory from which they (either explicitly or implicitly) draw: casting the problem as an issue of matching provider-patient pairs on race or gender draws on social identity theory (Abrams and Hogg 1990; Tajfel 1981), while emphasizing social distances caused by asymmetry

implies the importance of status characteristic theory (Berger et al. 1977). These two theories share a concern for understanding group processes when members are motivated toward solving a discrete task that requires the consideration of input from all (Kalkhoff and Barnum 2000; Oldmeadow et al. 2003), a situation that encompasses the provider-patient encounter (Gallagher et al. 2005). Sharing a common scope of concern is necessary if we are to attempt to understand which of the two best fits patterns seen in data. Where these two theories diverge is their explanation of how dissimilar pairs compare to similar ones – precisely the situations we need to address while we await the desegregation of the medical practitioner workforce.

The context in which I will adjudicate between the two theories is a patient's trust in his or her provider. Trust in another person is the belief that transferring control to them in a specific situation will minimize risk. Overall, trust in medical professionals has fallen (Mechanic 1996, 1998; Pescosolido, Tuch, and Martin 2001), with many suggesting that low trust contributes to healthcare inequities (e.g., Doescher et al. 2002; Schnittker 2004). Generally, trust is seen as a "good" thing, with literature documenting that a patient's trust in a provider is associated with greater involvement in decision-making (Kraetschmer et al. 2004), patient satisfaction (Keating et al. 2005), coping with disease or illness (Wileman, May, and Chew-Graham 2002), and compliance with provider directives (Kerse et al. 2004). Trust, however, many not always be "good" (Hardin 2002; Cook, Levi, and Hardin 2009). Centering the discussion on patient trust is therefore a suitable choice if our goal is to address healthcare inequities.

I will setup a theory competition between social identity theory and status characteristics theory to explain how trust in provider-patient dyads matched on gender and race compares to trust in unmatched pairs. I begin with an overview of the literatures from which the competing propositions derive, and then move to a discussion of patient

trust. My review is guided by the conception that the perceived competence of another person is one factor that shapes trust in the person (Mayer et al. 1995)[3]. The review also leads me to a generalization that the degree of perceived provider competence modifies the differences between concordant and discordant pairs. I use data drawn from the HIV Cost and Services Utilization Study (HCSUS) to adjudicate between the two theories. These data are suitable for the question at hand since it is one of few datasets that provide information on gender and race for both the patient and his or her provider. I end with a discussion of how the results affect the development of interventions that ameliorate healthcare inequities.

Theoretical Framework

Both social identity and status characteristics theory are located within the structural social psychology perspective (Lawler et al. 1993), while survey research on provider-patient dyads primarily draws on the social structure and personality perspective (McLeod and Lively 2003). Before I begin to explain the two theories, it is important that I demonstrate that the foundational perspective of these theories is compatible with the context at hand.

Within the perspective of social structure and personality, social structure is defined as the enduring and bounded patterns of social relations (House 1981). The bulk of research that uses the social structure and personality perspective examines the influence of social structure on personal outcomes; social structure is seen as an

[3] According to Mayer et al. (1995), there are two other factors that affect trust in another person: the person's benevolence and integrity. While these two are certainly related to social identities and status characteristics, the questionnaire item available to gauge trust (described in the methods section) limits my assessment to only the competence component of trust. The findings presented here are still relevant nonetheless. In the last few decades, the medical encounter has moved away from a paternal environment to one in which providers offer options and information (Elwyn and Edwards 2009), a situation that would emphasize provider competence.

independent variable in these studies that explains the primary unit of analysis, personal outcomes.

Of important consideration to research using the social structure and personality perspective is how one level of analysis influences another level – the *mechanisms* that are the focus of the social structure and personality. To assist in producing logically sound analyses, researchers in this tradition sometimes use three principles for analyzing the flow of influence between social structure and psychological outcomes that House (1981) set forth: the components principle, the proximity principle, and the psychological principle. The components principle states that researchers must identify the specific component of the social system, such as social stratification or social class, which is the key to understanding the research question. In the proximity principle, researchers identify the mechanisms through which macro-social structures impact an individual, such as occupations. Lastly, the psychological principle addresses the individual psychological processes that are shaped by proximal experiences (e.g., social learning). It is this third principle that links this perspective to other social psychological paradigms (Lively and McLeod 2003). The structural social psychology perspective (Lawler et al. 1998), the home for both social identity theory and status characteristics theory, purports that the components principle becomes enacted through proximal experiences with group members.

For this research paper, the individual outcome I will be investigating is a patient's trust in his or her physician. We can conceive of these dyadic interactions as a derivation of the proximity principle in the social structure and personality perspective. The structure of these dyadic interactions – their concordance – influences the individual outcomes of the patient. Next is an explication of social identity theory and status characteristics theory, and how they provide diverging conclusions about patient trust in discordant provider-patient dyads.

Social Identity Theory

Social identity theory describes identities as our definitions of categories to which we belong. Upon meeting someone, we instantaneously categorize ourselves and the other person based on salient attributes and access prior knowledge about members of those categories (Brewer 1988; Fiske and Neuberg 1990). Merely categorizing oneself into a group creates an in-group and an out-group (Tajfel 1981), where the in-group is everyone who is also a member of the salient category to which we grouped ourselves and the out-group is everyone who is not a member of that category. There is a tendency to view members in the out-group as homogenous and members of the in-group as heterogeneous, and this is moderated by the size of the groups such that smaller in-groups lead to an increased likelihood of viewing in-group members as homogenous (Mullen and Hu 1989). Moreover, because the theory suggests that we generally seek to maintain a positive image of oneself (Tajfel 1982), any trait differences between oneself and an out-group member would lead one to disparage the traits of the out-group member (Mullen, Brown, and Smith 1992). The provider-patient dyad would thus constitute a situation where any similarities between the two become amplified, and this idea forms the basis for one collection of research that emphasizes dissimilarities between patient and provider as the source of healthcare inequities (e.g., Cooper et al. 2003; LaVeist and Nuru Jetter 2002; Street et al. 2008). Compared to patients in concordant dyads, patients in discordant ones would view their provider as lacking in valued traits.

The valued trait of relevance to the current research is perceived competency, particularly as it relates to perceptions of trustworthiness. Social identities provide the basis for many of our attitudes, beliefs, and values. We expect members of the same categories to be similar across all of these qualities (Turner 1991; Turner and Oakes 1989), and because of the well-documented in-group bias aforementioned we tend to assume that knowledge held by in-group members is more accurate than that held by out-group members. This assumption helps us manage situations where we are motivated to

reduce uncertainty and opens us up to influence from our in-groups (Turner 1991; Turner and Oakes 1989). Moreover, information provided from an in-group member is more likely to be accepted than when it comes from an out-group member, even if information quality is poor (Mackie, Gastardo-Conaco, and Skelly 1992).

We can use this information to derive how patients' view of provider competence differs in discordant and concordant pairs. Any race or gender differences between the provider and patient would cause the patient to perceive the provider as an out-group member with respect to these social categories. Because patients are not privy to the expert knowledge held by providers, it can produce uncertainty during the medical encounter that can be ameliorated by inferring that in-group members are more likely than out-group members to hold accurate information.

Proposition 1a: Patients in a discordant dyad will infer that their provider holds less competence than patients in a concordant dyad.

Status Characteristics Theory

The theory states that observable behavioral inequalities in a group emerge as a result of differential performance expectations. Specifically, members who are expected to perform better at the task than others are given more action opportunities, rated higher for their performance, perform more actions, and have more influence over group decisions than other members who are not expected to perform as well. Information about who holds direct knowledge of the task at hand can produce these inequalities. Such is the case with provider-patient dyads, since the provider is expected to hold expert medical knowledge.

Controlling for actual task competency, however, we find that there are still other, seemingly extraneous, factors that contribute to behavioral inequalities in groups. Members may indirectly infer task competency based on characteristics with valued states, or diffuse status characteristics. Specifically, when characteristics with valued states become salient in the situation, members (non-consciously) infer task competency

to be positively related to the value of these states. Gender, for example, is a diffuse status characteristic with the male state generally valued more than the female state (see Ridgeway 2011 for a recent review). When men and women work together in a situation defined by the scope conditions aforementioned, the group will tend to value men over women. As a result, they will collectively infer that men hold greater task competency than women, and the behavioral inequalities will follow. Such inferences that are derived from status value hold even in instances where diffuse status characteristics are artificially created in a laboratory setting (e.g., Ridgeway et al. 1998).

Taken together, status characteristics theory provides an alternative description of how competency attributions in discordant provider-patient pairs compare to concordant ones when actual task competency is held constant. A concordant dyad is one in which the provider and patient are deemed equal in status because there are no salient distinctions between them that would contribute to the formation of expectations (at least, none that we can detect Walker and Simpson 2000). Attributions in discordant pairs, conversely, will be shaped by the relative status of the provider and patient, with some patients inferring greater competency than others. This emphasis on the asymmetry between patient and provider is at the center of the second set of explanations for why concordance matters (e.g., Balas and McGuire 2001; Malat 2001; Schnittker 2004). Less explored in this research are the implications for patient outcomes when the patient possesses more valued diffuse status characteristics than the provider. Status characteristics theory gives us purchase on these situations, while at the same time providing an understanding for the most common situation where the patient possesses the less valued diffuse status characteristics. If we assume that direct task knowledge (or at least the perception of it) is held constant across all pairs, then we can focus on inferences based solely on diffuse status characteristics (e.g., gender and race).

Proposition 1b: Patients in a discordant dyad will infer that their provider holds more (less) competence than patients in a concordant dyad when the provider

holds diffuse status characteristics that are valued higher (lower) than the ones held by the patient.

Patient Trust

A gap in competence between any professional and client means that the client is often incapable of validating the work of the professional (Ben-Sira 1976), thus providing fertile ground for the emergence of trust (Parsons 1970). This type of trust is referred to as fiduciary in that it involves a client's trust in the specialized knowledge of a professional (Barber 1983; Lewis and Weingert 1985). The public trusts professionals to not be exploitive of the power and prestige granted onto them (Goode 1957). Moreover, this trust carries itself from beyond a specific professional to the entire profession as a whole in that we trust the profession to socialize and govern the actions of an individual professional (Frankel 1989).

Provider-patient trust is an integral part of is relationship. Trust can influence patient satisfaction and even lessen the distress involved in managing a disease or illness (Keating et al. 2005; Wileman, May, and Chew-Graham 2002). Factors that influence trust in providers include the outcome of a diagnosis (Haugli, Strand, and Finset 2004), the extent to which expectations are met (Bell et al. 2002; Mechanic 1996), privacy and confidentiality (Anderson and Dedrick 1990), length of interaction (Mechanic 1996, 1998; Shortell et al. 1998), availability (Thom et al. 2001), and the accuracy of decisions (Anderson and Dedrick 1990). As you can see, a subset of these is related to attributions of competency, thus implicating attributions based on mismatches between a patient and his or her provider. Indeed, research documents that patient trust is positively associated with their perceptions of the provider's competence (e.g., Hall et al. 2002; Rose et al. 2004; Sheppard, Zambrana, and O'Malley 2004).

Proposition 2: A patient's trust in his or her provider will be positively associated with how competent they believe their provider to be.

The degree of perceived provider competence can modify the proposed differences in trust among dyads. As mentioned previously, we generally expect providers to be competent and this forms a strong basis for establishing trust with the provider. We, as perceivers of a complex world, rely so heavily on expectations to manage situations that our brains may even be hardwired to detect unexpected information (Cacioppo et al. 1994). When the provider's demonstration of his or her competence is deemed by the patient as excellent and meeting role expectations, the situation requires very little attentional focus (Bargh 1997). But when the patient's expectations that the provider possess expert medical knowledge are not met, this can produce uncertainty and a search for causal attribution. More specifically, the uncertainty can lead to an increased reliance on salient attributes of the situation, such as a status differential or social identity. Other research has documented that greater uncertainty between patients and providers produces a greater reliance on a priori beliefs to interpret and evaluate one another (Balsa and McGuire 2001). Schnitter (2004), for example, demonstrates that patients who are socially distant from their providers may interpret provider behaviors differently; even if competence were held at a constant level, the interpretation of the provider's competence may be dependent upon the relationship context.

Both status characteristics theory and social identity theory have a shared concern with explaining the reduction of uncertainty (see Kalkhoff and Barnum 2000 for one discussion), and are thus implicated in patients' interpretation of physician competence when it is in question. Each theory agrees that unmet expectations would affect attributions of competence. Research in social identity theory, for example, has extended our insights on the fundamental attribution error (Jones and Harris 1967) to reveal how group categorizations can moderate the attribution process. The fundamental attribution error describes a perceiver's inclination to implicate a target person's dispositional tendencies as causes for behavior, while neglecting situational factors. Pettigrew (1979)

posited that this inclination can be used to explain prejudices against members of out-groups, such that dispositional explanations were used more often to explain negative behavior while situational ones were used more often for positive behavior. These cognitive biases serve to preserve our stereotypes. Subsequent research found supportive evidence for this intergroup effect (see Hewstone 1990 for one review). For example, Weber (1994:Study 2) showed that this process underlies ethnocentrism among African and Korean American students in Los Angeles following the Rodney King trial. Others have used our understanding of these mechanisms driving prejudice to diminish it, in that they are training perceivers of out-group targets to focus on situational factors when explaining negative behavior (e.g., Stewart et al. 2010).

In the status literature, compelling evidence has coalesced around the notion that actors who are relatively higher status than their interactional counterparts enjoy a "halo" effect, whereby they are given the benefit of the doubt (Foschi 2000) and are expected to be good in all of their behavior (Wahrman 1970); principles of cognitive consistency cause us to assume good things from good people. We often attribute good outcomes to their personal actions and bad outcomes to the situation (Giordano 1983; Howard and Pike 1986), and protect them from hostility from others when they violate expectations (Cohen 1955). Wagner's (1988) theory of status violations suggests that groups collectively protect high status actors who violate behavioral expectations. For example, the group might provide the status violator with more opportunities to perform, thereby giving the actor openings to secure his or her group position. The institutional environment may even act to protect high status actors, as in the case of physicians facing medical malpractice suits (Schwartz and Skolnick 1962).

Drawing from both of these literatures, we can see that poor provider competence (as perceived by the patient) would modify the differences in trust between discordant and concordant pairs. Specifically, both literatures suggest that the differences in patient trust would increase as perceived provider competence decreases. Poor provider

competence is an instance of negative, unexpected behavior on the part of the provider, and patients may draw from salient attributes of the situation (social identities or status differences) to substantiate inferences about why competence is poor. Because provider competence affects the patient's trust (*Proposition 2*), these inferences in turn will also affect trust:

Proposition 3: As the patient's perception of provider competence decreases, the differences in patient trust between concordant and discordant dyads will increase.

Hypotheses

The data described in the next section provide information on the gender and race composition of provider-patient dyads. These data also provide an indicator of the patient's inference about the competence of his or her provider – their evaluation of the quality of care received. We can derive from the propositions outlined in this essay the following testable hypotheses:

Hypothesis 1a: Provider-patient dyads discordant on gender or race will have lower patient trust than dyads that are concordant.

Hypothesis 1b: Provider-patient dyads discordant on gender or race will have lower (higher) patient trust than dyads that are concordant if the patient possesses the higher (lower) valued state of the characteristic.

Hypothesis 2: Patient trust will be positively associated with perceptions of the quality of care received.

Hypothesis 3: Patient trust among dyads discordant on gender or race will be modified by the quality of care received, such that the differences between concordant and discordant pairs will be magnified as quality of care decreases.

Data and Methods

Data come from a sample of HIV patients and their providers, described momentarily. These data are suitable for testing an instance of the theoretical claims,

however, there are certainly limitations with respect to using a dataset solely on patients with HIV. In general, trust tends to be high in instances where the trustor has very little to lose and much to gain from trusting the trustee (Coleman 1990). In such instances, the trustor essentially has no other option but to trust the other person. As such, trust may operate differently in patients with HIV (and perhaps other patients with chronic conditions) from those seeking routine care from a primary care physician. Moreover, confidentiality concerns may be more serious and increase the strength of the relationship between trust and individual outcomes (Hall et al. 2001). Lastly, patients with HIV tend to be more informed about their medical situation than other patients (Epstein 1996). Informed patients tend to participate more in decision-making, which is associated with trust in a provider (Kraetschmer et al. 2004). Taken together, this would increase the probability that I would find a relationship between status differentiation and trust with these data. It would not necessarily be the case that these relationships do not occur with other patients; instead, we might expect that these relationships would be more difficult to identify among patients seeking routine care (i.e., greater probability of a Type II error).

Providers' attitudes with respect to HIV may also be different, thus creating a different relationship dynamic as that seen with other patients. HIV is heavily documented as a stigma in the public eye (Devine, Plant, and Harrison 1999; Neumann, Hülsenbeck, and Seibt 2004; Parker and Aggleton 2003), and physicians are no exception. Physicians tend to view HIV patients differently from others, particularly those who contracted HIV because of intravenous drug use (Ding et al. 2005). Moreover, physicians tend to predict that African American men would be the least likely of all HIV patients to adhere to treatment decisions (Bogart et al. 2001).

Nonetheless, there are similarities between HIV patients and those seeking routine care, such as research documenting healthcare inequities that mirror that seen among routine patients. Like treatment for patients seeking routine care, disparities in HIV

treatment exist along racial and ethnic lines. African American HIV patients are less likely than European American patients to have access to a physician with HIV-specific expertise (Heslin et al. 2005), a resource which has been shown to lower relative risks of death (Kitahata et al. 1996). African Americans are also less likely to receive and use antiretroviral treatment for HIV compared to European Americans (Moore et al. 1994; Shapiro et al. 1999). Some researchers have examined attributes of the relationship between physicians and HIV patients to explain this disparity in treatment and found that racial concordance (King et al. 2004), the extent to which the patient participates in medical encounters (Sullivan et al. 2000), and patient satisfaction with the relationship (Schneider et al. 2004), produce better treatment outcomes. Lastly, African Americans are the least likely among HIV patients to receive end-of-life discussions from their physicians (Wenger et al. 2001).

Data come from the HIV Cost and Services Utilization Study (HCSUS), a survey of noninstitutionalized adult HIV patients who were 18 or older and made at least one visit to a nonmilitary, nonprison medical provider (except emergency departments) within the contiguous United States during the period from January 5 to February 29, 1996 (Frankel et al. 1999). The researchers used a three-stage sampling design where the patients of providers within geographical areas were sampled. Three waves of data collection were completed, creating a prospective cohort study. The first wave of data collection occurred between January 1996 and April 1997, the second between December 1996 and July 1997, and the third occurring between August 1997 and January 1998. All three questionnaires were completed in-person or over the telephone using computer-assisted programs. Out of the 4,034 patients sampled, 2,864 (71%) completed the Wave 1 questionnaire. Of those who completed this first questionnaire, 2,466 (86.1%) completed the Wave 2 questionnaire and 2,267 (84.5%) completed the Wave 3 questionnaire. Response rates are comparable to those obtained in other national studies of HIV patients that were conducted around the same time (e.g., Catania et al. 1992).

Provider data were collected based on information supplied by the patient at Wave 2. Patients were asked during this time to identify the provider who was the most important to their HIV care. Of the baseline sample, 2,642 (91%) were able to identify a provider. The number of providers identified was 692 (some patients identified the same provider). A total of 412 providers (59.5% of identified providers, 75% of those who had a confirmed identity, location, and mailing address) responded to a self-administered written questionnaire. These provider response rates are higher than those obtained by other studies that used similar methods (Asch et al. 1997). In total, 1,896 patients have linked provider data.

Measures

Next, I describe how the measures for the analysis were constructed. A descriptive summary of the measures can be seen in Tables 1 through 5. All sample sizes are after list-wise deletion. At the end of a description of measures, I present an attrition analysis to assess how list-wise deletion altered these data.

Dependent Variable

Trust in provider was measured on a five-point scale with the question, "How much do you trust your doctor or clinic to offer you high quality medical care?," a question that focuses on the perceived competence of the provider. This question has been incorporated into the Patient Trust Scale (Kao et al. 1998) and is considered as a question that taps into provider competence (Hall et al. 2002; Rose et al. 2004). While patients may not have the expert knowledge necessary to assess the quality of care, they do base their perceptions of competency on the provider's socioemotional abilities (Hall et al. 2002).

While other questions that gauged trust were present in these data, this was the only question that appeared across all three waves. While the question does mention "doctor," most patients are unable to distinguish between different medical care providers (Santen, Rotter, and Hemphill 2007). In addition, their trust in an institutional context,

such as a "clinic," is highly correlated with their trust in an institutional actor, in this case "doctor" (Hall et al. 2001).

This scale is anchored by "Completely" = 1 and "Not at all" = 5. The trust measure was reverse-coded so that higher values represented greater trust in the provider. Table 3.1 shows descriptives for the dependent variable. On average, across all three waves the respondents reported having close to complete trust in their provider. The values across the three waves range from 4.38 to 4.51. These means are comparable to those obtained by others using a similar question (e.g., Rose et al. 2004).

Control Variables

Means and percentages for time-varying and time-constant variables are presented in Tables 2 and 3, respectively. Time-varying controls included in the analyses are employment status (paid employment versus no paid employment), monthly income (in dollars), insurance type (public, private, none), marital status (currently married versus not married), reported number of visits to a physical health professional, and reported number of visits to a mental health professional. Income is presented in the table in its raw form, but it is logged for use in the analyses. The mental health factor score is also a time-varying control, but it is discussed separately below and described in a separate table. Table 3.2 shows that the percent nonresponse for any time-varying variable is 1.1 percent or less, with the exception of income, which has percentages ranging from 4 percent in Wave 3 to 7.8 percent in Wave 1. These percentages suggest that list-wise deletion is suitable, and that multiple imputation would be unwarranted. Time-constant variables include patient race, patient gender, provider race, provider gender, and years of education.

On average, respondents are low in socioeconomic status. The average years of education just under 13, suggesting that the average respondent only has a high school degree. Their average monthly incomes point to annual salaries that are less than $25,000. Only between 36 and 40 percent of the sample reports being employed during a

single wave of collection. At each wave, more than half (59-65%) of respondents report having some form of public health insurance. Next, I detail the scales used to measure additional controls at each wave. These are described with the other time-varying controls in Table 3.2.

Self-reported health was measured on an 11-point Likert scale anchored with the label, "Worst possible health," at the lower end and the label, "Best possible health," at the higher end. This question comes from the Medical Outcomes Study and is applied in a number of HIV research studies conducted around the same time as this one (Wu et al. 1997). Respondents in this sample generally report their health being on the higher end of the continuum, with means varying between 6.99 and 7.43. These means are slightly lower than that which was recorded in national samples of patients that were collected around the same time as these data (e.g., National Health Interview Survey 1996, 1997, 1998). Mean self-reported health increases with each consecutive wave, a fact that I examine shortly through an attrition analysis.

Quality of life was measured similarly on an 11-point Likert scale with the label, "Worst possible quality of life," at the lower end of the scale and the label, "Best possible quality of life," at the higher end. Like self-reported health, mean quality of life in the sample increases with each wave, moving from a mean of 7.03 in Wave I to a mean of 7.48 in Wave III. This overall measure of quality of life is used in much other research on HIV patients (Wu et al. 1997).

Quality of care was measured on a five-point scale with the question, "Overall, how would you rate the quality of the medical care you received in the past 6 months?" ("Poor" = 1 to "Excellent" = 5). The means for this measure were in the moderate to high range of the scale, varying from 3.99 to 4.08. This question was adapted from prior research on HIV patients (e.g., Cleary et al. 1992).

Mental health is the factor score resulting from the analysis of nine items, outlined in Table 3.4. Each item required the respondents to report how much of the time during

the past four weeks they felt a particular state (calm and peaceful, downhearted and blue, tired, happy, nervous, energetic, down in the dumps, anxious or worried, and depressed). Each response is measured on a six-point scale (anchored by "All of the time" = 1 and "None of the time" = 6). These items were adapted from the Medical Outcomes Study 36-Item Short Form (SF-36) Health Survey (Ware and Sherbourne 1992). I coded them for consistency in direction, such that higher values were indicative of better mental health. Prior to the factor score transformation, these items were on average in the moderate to high range (between 3 and 5) of their respective scales across all three waves. All of the means increased with each wave, a pattern I examine closer in the attrition analysis. Consistently in all three waves the highest mean was for the "down in the dumps" question, with this mean ranging from 4.929 to 5.130.

I conducted a principal component (PC) factor analysis on these items to assess how well they represent one underlying construct (Tabachnick and Fidell 1996). Each set of variables loaded on only one factor, with loadings generally considered very good indications of coherent subsets (Comrey and Lee 1992). I then performed a confirmatory maximum likelihood (ML) factor analysis and saved the standardized factor scores. The resulting factors for the three waves were normally distributed with a mean close to zero and a standard deviation close to one. I also computed Cronbach's alpha (α) to assess the internal consistency of the nine items, and these ranged from .91 to .92.

Independent Variable

I constructed my independent variable by linking patients to their providers. My focus is on the relative status difference in the dyad, and I concentrated on the race and gender status characteristics (for providers, I only had access to their race and gender). The distribution of status differences between provider-patient dyads is shown in Table 3.5. I have only included information on dyadic configurations that comprised five percent or more of the sample. Gender and race for patients is measured at Wave 1 while for physicians it is measured at Wave 2. Both of these characteristics are assumed to

remain stable across waves. Recall that with gender, the male state is valued higher than the female state (Ridgeway 2011), and with race, the European American state is valued the highest (Cohen and Roper 1972). For some race states (Latina/o, Other), research has not yet determined if they are valued more or less than the European American state or how they compare to other states (i.e., in the dyad do Latinos have more or less status than African-Americans?).

I matched patients with their providers and present the percentages for similar and dissimilar states, based on information gleaned from Wave 2. After list-wise deletion on the availability of information for these status characteristics for both members of the dyads, the majority of the sample dyads are matched on gender or race status. For race, the largest equal status group is the white-white pairing (38.0%) while for gender, the largest one is the male-male pairing (54.6%). This comes as no surprise as the samples of patients and providers are composed of mostly European American men. For more percentages, see Table 3.5.

Attrition Analysis

I limited the analyses to respondents for whom provider demographic data (race and gender) was available. Provider demographic data is available for 1,896 respondents. Since this subset of the sample was potentially different from the rest of the sample, I conducted an attrition analysis using mean difference tests. Tests using Levene's statistic for the equality of variances showed that the sample variances between the comparison groups were not homogenous and the appropriate modification to the t-tests were performed. I conducted a series of two-tailed independent two sample t-tests that compared the means of control, dependent, and independent variables between those with provider data and those without. For time-varying variables the tests were repeated for each wave. There were no significant differences between the two samples with an alpha set at .05, including patient trust and quality of care, except self-rated health. Specifically, respondents without provider data rated their health slightly higher (M =

7.16, *S.D.* = 2.10) on an 11-point scale in Wave I than those with linked provider data (*M* = 6.98, *S.D.* = 2.28, $t = 2.15$, $p < .05$).

I focused the next part of the analysis on only those respondents with provider data. I dropped respondents who were missing on the dependent, independent, and control variables using list-wise deletion. The resulting sample sizes were 1,704, 1,362, and 1,176 for Waves I, II, and III, respectively. I analyzed the characteristics of respondents who fell from the study at each successive wave, beginning with Wave I. Because the sample sizes for the comparison groups are so different (e.g., sample size for those in Wave II was 1,362 while the sample size for those who were excluded was 344), it is difficult to assume that they are equal in their ability to approximate variances. Levene's tests for the equality of variances confirmed that the variances were not homogenous and the appropriate modifications to the t-tests were performed. The analysis of the loss from Wave I to Wave II is presented in Table 3.6 and the analysis of the loss from Wave II to Wave III is shown in Table 3.7. Importantly, neither in the Wave I to Wave II analysis ($t = .29$, $p > .05$), nor in the Wave II to Wave III analysis (Wave I: $t = 1.20$, $p > .05$; Wave II: $t = 1.55$, $p > .05$), was it revealed that attrition was associated with the respondent's trust in provider from a prior wave. Self-reported quality of care was significantly lower among those who were dropped in the loss from Wave I to Wave II (In: *M* = 4.05, *S.D.* = 1.06; Out: *M* = 3.86, *S.D.* = 1.08; $t = 2.85$, $p < .01$). The same is true in the loss from Wave II to Wave III for quality of care measured at Wave I (In: *M* = 4.08, *S.D.* = 1.03; Out: *M* = 3.87, *S.D.* = 1.21; $t = 2.26$, $p < .05$) and Wave II (In: *M* = 4.02; *S.D.* = 1.04; Out: *M* = 3.82, *S.D.* = 1.13; $t = 2.19$, $p < .05$). Since one focus of this analysis is on group differences with respect to the effect of quality of care on patient trust, this loss might bias the slopes for each group that relate quality of care to patient trust, but the group differences between slopes would remain constant. The only way that these group differences in slopes would change is if the attrition systematically altered the way in which certain quality of care relates to trust for some

groups, but not others. The pattern of attrition (described momentarily) suggests that this was not the case as those respondent characteristics generally associated with poor quality of care were also lost.

From Wave I to Wave II we see a clear pattern of respondents from low socioeconomic backgrounds dropping out of the study, but less so from Wave II to Wave III. Respondents dropped at Wave II have significantly less years of education (M = 12.20, $S.D.$ = 3.28) and a lower monthly income (M =1498, $S.D.$ = 1,721) at Wave I than those who stay in Wave II (education: M = 12.91, $S.D.$ = 3.20; income: M = 1916, $S.D.$ = 1995). For both of these t-tests, the probability that the result was due to chance was less than .001 (education: t =3.57, $p < .001$, income: t = 3.90, $p < .001$). In addition, compared to respondents who remained in Wave II (M = .38, $S.D.$ = .48), a significantly lower proportion of respondents who were dropped reported being employed (M = .27, $S.D.$ = .44, t = 3.91, $p < .001$). The proportion reporting not having any insurance was also significantly larger (t = 2.80, $p < .01$) for those who fell from the study (M = .15, $S.D.$ = .36) than those who remained (M = .07, $S.D.$ = .25). In the Wave II to Wave III analysis, only insurance status remains significantly different between those who remained in the samples and those who were removed. Specifically, a greater proportion (t = 2.96, $p < .01$) of those who were dropped reported having no insurance (M = .25, $S.D.$ = .44) than those who stayed (M = .12, $S.D.$ = .32).

A pattern shared from the progression of Wave I to Wave II and of Wave II to Wave III is that respondents who were dropped have a poorer health status in the wave just prior compared to those who stayed in the samples. For example, self-reported health is lower (t = 3.84, $p < .001$) among the respondents who were dropped (M = 6.55, $S.D.$ 2.41) from Wave I to Wave II than those who were kept (M = 7.10, $S.D.$ = 2.20), and the same is true with the transition from Wave II to Wave III (In: M = 7.13, $S.D.$ = 2.29; Out: M = 6.59, $S.D.$ = 2.41; t = 2.89, $p < .01$). Self-reported quality of life also follows a similar pattern in the analysis from Wave I to Wave II (In: M = 7.12, $S.D.$ =

2.35; Out: M = 6.68, *S.D.* = 2.70; t = 2.74, $p < .01$) and Wave II to Wave III (In: M = 7.15, *S.D.* = 2.50; Out: M = 6.53, *S.D.* = 2.66; t = 3.01, $p < .01$). Lastly, the means on the mental health factor are significantly different (t = 3.28, $p < .001$ at Wave II; t = 2.20, $p < .05$ at Wave III), with those who dropped at Wave II (M = -.16, *S.D.* = 1.00) and Wave III (M = -.16, *S.D.* = 1.06) having a lower mean in the previous wave than those who stayed in the samples (Wave II: M = .04, *S.D.* = .95; Wave III: M = .02, *S.D.* = .95).

The emerging pattern is that non-white respondents who are lower in socioeconomic status (income and education) than the rest of the sample were likely to be dropped from the analysis at each wave. All of these factors tend to be highly correlated with one another, and are associated with low trust in a provider (Doescher et al. 2000), yet the attrition analyses revealed that mean trust in provider remained stable after list-wise deletion. This may be due to the earlier speculation that trust among HIV patients is in general more important than for patients seeking routine care. In addition, the background of these patients who are falling from the study is associated with the reporting of lower care quality compared to European American patients with high socioeconomic status (e.g., Saha et al. 1999). Quality of care is positively associated with trust in a provider (e.g., Schnittker 2004), suggesting that we might expect this to alter mean trust in provider, but that was not the case even though quality of care was significantly different between the comparison groups. In addition, this suggests that the group differences of how quality of care relates to trust remain stable.

Results

All analyses used ordinary least squares (OLS) regression, and when appropriate (i.e., cases where the assumptions of OLS were not met) I adjusted the models to correct the standard errors. Researchers have argued that OLS is inappropriate (e.g., Winship and Mare 1984) for examining an ordered categorical variable, since the results of applying an OLS model versus an ordered logit model were similar to one another I discuss those from the OLS models for ease of interpretation.

All analyses are also cross-sectional. I conducted a longitudinal analysis of these data, but findings were not consistent across models and are thus excluded from the paper. It is likely that these social psychological processes are temporally proximal and only appear during a cross-sectional analysis. Another possibility is that trust did not vary enough from wave to wave. As the attrition analysis demonstrated, trust among this sample of patients was fairly stable.

For the first analysis, I ran three separate ordinary least squares (OLS) regressions, one on each of the waves. I regressed trust on the race and gender characteristics of the patients and their providers, ignoring their relative status differences. Thus, this analysis focused on individual-level and not relationship-level characteristics that influence trust. Abridged results are shown in Table 3.8.

In none of the three waves does the race of the patient have a significant relationship with trust in their provider. Gender does have a significant association, with women reporting slightly more trust in their provider than men, but only at Wave I (β =.105, $p < .05$), suggesting that the finding is not robust. Neither the race nor gender of the provider significantly explains variation in self-reported trust.

The major contributor to variation in self-reported trust is the patient's quality of care, and this is constant across all three waves. The coefficients are statistically significant ($p < .001$) and range from .395 (Wave 2) to .477 (Wave 1). Nested regression models (results not shown) suggest that quality of care correlates with patient race, such that African-American patients report lower care quality than European-American patients. This is consistent with prior research suggesting that ethnic minority patients have access to poorer health care resources (Doerscher et al. 2000). The introduction of the quality of care covariate thus increased the magnitudes (albeit, not enough to make them statistically significant in this sample) of the race coefficients. This suggests that studies that do not control for quality of care might be reporting biased race coefficients. Depending on the correlation between race and quality of care in the data, they may be

overestimating a negative race effect or reporting a negative race effect when in fact it is positive.

Not pictured in the tables is an analysis I conducted that mirrored that which was undertaken by Schnittker (2004). In these models I only regressed the gender and race of the patient on trust, and included an interaction that crossed the race of the patient with quality of care. The results replicated Schnittker's (2004) in that the interaction terms were significant and suggest that the race of the patient modifies the relationship between quality of care and trust. Specifically, Non-European American patients generally had a flatter slope that related quality of care to trust across all three waves. That is, quality of care has a weaker effect on trust for these patients compared to European American patients. However, once I include indicators for the gender and race of the provider in these models, these group differences disappear. Combined with the results shown in Table 3.8, these demonstrate the importance of considering provider characteristics when assessing the effects of gender, race, and quality of care on patient trust.

What is still not clear is how these relationships might differ between discordant pairs and concordant ones, and if results like those presented by Schnittker (2004) and others who center on social distance explanations remain stable when examining linked patient-provider data. Subsequent analyses depicted in the next two tables will adjudicate between the competing hypotheses, based on how trust in discordant dyads compares to concordant ones. Recall that social identity theory suggest that all discordant dyads, regardless of relative status, will have less patient trust than concordant ones (*Hypothesis 1a*) while status characteristics theory points to a process by which trust is contingent upon relative status in the discordant dyads (*Hypothesis 1b*). Both theories suggest that these relationships are modified by quality of care (*Hypothesis 3*).

Next, I focused the analysis on the linked patient-provider data with the relative status configurations and interactions with quality of care as the primary explanatory variables. I conducted this analysis on the three individual cross-sections of the study as

well as on a pooled sample of the three waves. The pooled sample provides a useful summary of the three waves, particularly since there is a short interval (less than one year) in between each wave of collection. For all analyses, the reference pairing is a male European American provider with a male European American patient.

Table 3.9 shows a summary of this version of the cross-sectional analysis. Standard errors are corrected for clustering on the provider variable. Note that I included interaction terms for self-reported quality of care and status configuration, thereby changing the usual straightforward interpretation of the "main effects" of status configuration and quality of care. These can no longer be interpreted as the effect when all other variables are held constant. The coefficients for status configuration now describe the effect of the status configuration when self-reported quality of care is at zero, holding all other variables constant. The coefficient for quality of care now represents the slope describing the effect of quality of care for the reference pairing only, holding all other variables constant. The coefficients for the interaction variables are adjustments to this slope and describe group differences about how quality of care relates to trust.

In Wave I we see that when self-reported quality of care is at its lowest, two status configurations emerge as being statistically significant from the reference pairing. European American female patients with a European American male provider report greater trust in their provider (β = .767, p < .05) than patients in the reference pairing. Because the patient and provider are matched on race, this coefficient demonstrates a gender status characteristic effect (assuming that all other status characteristics – such as beauty – are held constant or averaged out), whereby the provider's high gender status characteristic is associated with increased trust over that seen when the dyad are concordant on gender and race. We see a concomitant gender status characteristic effect going in the opposite direction when the provider is low on the gender status characteristic. Specifically, when quality of care is zero male European American patients with a female European American provider report lower trust (β = -.609, p < .05)

than the reference group. The results from this wave support the hypothesis derived from a status differentiation perspective (*Hypothesis 1b*) as opposed to those that stem from a social identity framework (*Hypothesis 1a*).

The main effect for quality of care is significant (β = .502, p < .001), supporting *Hypothesis 2*. The interaction terms that adjust this main effect for the two status configurations are also significant, suggesting that self-reported quality of care modifies the relationship between status and trust (*Hypothesis 3*). See Figure 3.1 for a graphical representation of this finding. When the provider is high on the gender status characteristic, self-reported quality of care has a weaker effect on trust compared to the reference pairing (β = -.171, p < .05). In other words, the slope describing the relationship between self-reported quality of care and trust is flatter (i.e., slightly closer to zero) in this relationship than in the reference pairing. Also significant is the finding that for patients where the provider is low on the gender status characteristic self-reported quality of care has a stronger effect on trust than that seen in the reference pairing (β = .135, p < .05). Here, the slope describing the relationship between self-reported quality of care and trust is steeper (i.e., slightly further away from zero) when compared to the slope for the reference pairing.

In Wave II, the coefficients for the female European American patient with a male European American provider (β = .714) remains only marginally significant (p < .10). The male African American patient with a male European American dyad is significant in this wave. Because the two are matched on gender we can assume that the race status characteristic is salient in this relationship, with the provider possessing the higher state (i.e., the provider is high on one diffuse status characteristic). We see status effects similar to those in Wave I when the provider was high on one diffuse status characteristic, gender. This is precisely what status characteristics theory suggests in that relative status is what guides social processes, and not necessarily which statuses are creating the differentiation. As in Wave I, when patients report the lowest possible

quality of care the high status of the provider is associated with ratings of trust that are greater than those provided by patients in the reference pairing (β = .960, p < .001). Quality of care has a weaker effect on trust than it does in the reference pairing (β = -.202, p < .01), which is consistent with *Hypothesis 3*. See Figure 3.2 for a summary of these findings. The main effect (β = .385, p < .05) and interaction (β = -.087, p < .05) for other pairings are significant, but it is difficult to interpret precisely what this means for the adjudication between the two theories. Quality of care continues to be the best predictor of trust in this model (β = .465, p < .001), supporting *Hypothesis 2*. No other coefficients relevant to our adjudication between the two theories are significant, though the trends are supportive of status characteristics theory (*Hypothesis 1b*).

In the Wave III regression, summarized in Figure 3.3, quality of care has a significant main effect on patient trust (β = .411, p < .001). The male African American patient with a male European American provider dyad continues to have a significant main effect (β = .661, p < .05) and is evidence for *Hypothesis 1b*. The interaction term, while not statistically significant (β = -111, p = .12), is negative and consistent with a status story that quality of care has a weaker effect on trust for patients who are lower status than their provider (*Hypothesis 3*).

A different pairing that has not appeared previously is statistically significant from the reference dyad in this wave: a female African American patient with a male European American provider. In this second, both gender and race are discordant and are likely salient status distinctions. The patient is low status on both distinctions, creating a situation not seen in any of the previously discussed configurations. Unlike other pairings where the patient was low status on only one characteristic, here the patient is low status on two and creates a larger status differential over that seen when it is only one. In social identity terms, this is a situation where the patient and provider are mismatched on two social categories. The coefficients associated with this pairing are different from that seen in the other significant ones where the patient was low status, in

that the main effect is negative (β = -.742, p < .01) and the interaction is positive (β = .153, p < .05). When quality of care is zero, these patients report lower trust than those in the reference pairing. Consistent with *Hypothesis 2*, as quality of care increases, it exerts a stronger effect on trust over that seen with patients in the reference group. These results are more consistent with the hypothesis derived from social identity theory (*Hypothesis 1a*) than the one from status characteristics theory (*Hypothesis 1b*). However, it does not rule out three other possibilities (one of which comes from the status literature), which I will detail further in the discussion section.

For the final examination, I pooled together information from all three waves and repeated the relationship context analysis. Results are available in Table 3.10 and Figure 3.4. Consistent with all previous analyses, the main effect for quality of care is significant (β = .456, p < .001) and lends support to *Hypothesis 2*.

In this pooled model, the analysis revealed two status configurations as being significantly different from the reference pairing, both of which were also significant in one of the previous cross-sectional analyses. These are: male African American patient with a male European American provider and female European American patient with a male European American provider. Both are cases where the patient is low status on one diffuse status characteristic, with race salient in the first pair and gender salient in the second pair.

The coefficients associated with these pairings are consistent with what appeared during the cross-sectional analyses, and are in line with *Hypothesis 1b* and *Hypothesis 3*. Specifically, when the provider is high on one diffuse status characteristic (race or gender) and self-reported quality of care is at its lowest, patients report greater trust than patients in the reference pairing (male African American patients with a male European American provider: β = .787, p < .001; female European American patients with a male European American provider: β = .646, p < .001). Self-reported quality of care has a weaker effect on trust for these patients as compared to patients in the reference pairing

(male African American patients with a male European American provider: β = -.161, p < .001; female European American patients with a male European American provider: β = -.130, p < .001).

A third configuration, male European patient with a female European American provider, has a main effect (β = -.500, p < .10) and an interaction effect (β = .108, p < .10) that are only marginally significant. This is a situation where the patient possesses the higher status gender state. The direction of these coefficients is the same as when this configuration appeared significant in the Wave I cross-sectional analysis, and contributes support to the hypotheses derived from status characteristics theory.

Taken together, these results are generally more consistent with the hypothesis derived from status characteristics theory (*Hypothesis 1b*) than one from social identity theory (*Hypothesis 1a*). Both *Hypothesis 2* and *3* were supported throughout the models. These results extend the findings of Schnittker (2004) and others using a social distance framework by including provider data. In addition, trust appears to be associated with patient-provider context, as opposed to individual-level traits like race or gender.

Discussion

Recent explanations for the persistence of health care inequities have centered on the structure of the medical profession, citing that a profession dominated by European American men leaves many patients paired with providers who are quite different from themselves. Put differently, researchers have begun to focus on concordance between patient and provider as the impetus for closing gaps in health care. The goal of the current research study was to identify the mechanisms by which concordance leads to different outcomes for patients, particularly how these dyads compare to discordant ones since discordance is a situation we need to understand while we await the desegregation of the medical profession. To this end, I identified two social psychological theories – status characteristics and social identity theory – that center on explaining how group members working together on a shared task (in this case, the health management of the

patient) come to form impressions of one another. Where these two theories deviate from one another is how impressions formed in a discordant dyad compare to those in a concordant one, precisely the understanding required while we await desegregation. I derived competing hypotheses that focused on predicting a patient's trust in his or her provider.

Results from analyses conducted on the 1996-1998 HCSUS data are generally consistent with status characteristics theory. Specifically, how patient trust in discordant dyads compares to concordant ones depends on the relative status of the patient and his or her provider, where status is based on gender and race distinctions. When the patient possessed the higher valued states, patient trust was lower than in a referent concordant dyad and this difference increased as patient-reported quality of care decreased. Conversely, when the patient held lower valued states, patient trust was higher than the referent concordant dyad. Just as in the dyads where the patient was high status, the difference in patient trust between a low status patient and one in the referent group increased as quality of care decreased.

From these results we might jump to the conclusion that maintaining a hierarchy (based on the formal distinctions of patient and provider and informal ones like gender and race states) is a necessary precondition to restoring patient trust in the medical profession. If we assume for a moment that the equal status referent pairing serves as a baseline condition, we can form an alternative conclusion that centers on identifying who is over- and under-trusting their provider. The equal status pair is often used in status characteristics theory to describe a baseline condition (Troyer 2002), that is, a condition that provides us with a straightforward interpretation of how other features of the situation shape outcomes when we control for status. When researchers make modifications to the standardized experimental setting used in this line of research, they often include an equal status condition to assess how these modifications systematically alter results. With respect to the current research, then, the main and interaction effects

associated with the equal status pair provide us with a "true" effect of quality of care on patient trust, one that is untainted by status differences[4].

With this assumption about these data in place, we can now form an alternative conclusion about how to address trust in discordant patient-provider dyads while we await the desegregation of the medical profession. Our responses must not assume that all discordant dyads are the same, but must instead be adapted to the status context of the dyad. First, the data on low status patients suggest that too much hierarchy can lead to over-trusting in a provider. Over-trusting, or misplaced trust, is little understood in the broader array of research arenas (Goel, Bell, and Pierce 2005) because so much of our emphasis is on how trust is "good" for social and economic relations (see also Hardin 2002; Cook, Levi, and Hardin 2009). One way to gain purchase on over-trusting is to understand how status differentiation in groups might contribute. The degree of a group's status differentiation is positively related to the likelihood that the group's structure is deemed legitimate (Kalkhoff 2005). Adding diffuse status distinctions that favor the provider to the formal differentiation already brought about by the provider and patient roles could therefore constitute a basis for over-trusting. Placing too much trust on a trustee would mean granting the trustee (in this case, the provider) control over matters where they ought not to have control. To the extent that we want to emphasize shared medical decision-making (Elwyn and Edwards 2009), this may not be warranted. Indeed, research has documented that in status differentiated groups, communication from the bottom up decreases (Hollingshead 1996). The conclusion from these findings then is that we need to continue to exert efforts to open communication lines from low status patients, since they may transferring too much control to their provider.

[4] Although the equal status pairing in this research is a male European American patient with a male European American provider, the theory would predict that results would be the same as with any other dyad concordant on both gender and race.

Second, the results from high status patients suggest that these would be the dyads where we need to increase patient trust. These patients may be less likely to adhere to their providers' directives, since trust directly relates to medical compliance (e.g., Kerse et al. 2004). We would need to not only intervene with the patient, but with the provider as well. It is these providers who possess the lower valued states of diffuse status characteristics who would experience a lack of compliance, and potentially low career satisfaction. Since in these data the low status providers were women paired with men, this could point to barriers women might face as they begin to desegregate the medical profession.

Two exceptions to the general pattern of trust are worth noting as they inform other lines of research: female African American patients paired with a male European American provider and male Latino patients paired with a male European American provider. With respect to the latter, in none of the regression models were the coefficients associated with this pairing significant, suggesting that the relative status between European Americans and Latinos is a complex one and there was not enough information available in these data to disentangle it. Very little research exists that describes with certainty the status relationship between Latinos and European Americans. Bonilla-Silva (2004) suggests that Latinos are stratified based on their skin color, where only those with a dark skin tone are considered lower status that European Americans. This would suggest that the average effect of being a Latino patient paired with a European American provider would be somewhere in between being low and equal status. The calculated regression coefficients would thus be a weighted average between the number of dark-skinned and light-skinned Latinos and, as seen in these models, likely not statistically significant to merit an adjustment to the predicted mean of the referent pair. The lack of statistical significance should not be taken as evidence for the similarity between Latinos and European Americans, but rather an indication that we need to expand our data collection before we form any conclusions.

In the former exception to the trend, both gender and race are salient and the patient possesses the lower valued state for each. This is a situation where the patient is low status on two diffuse status characteristics and we would expect that the relative pattern of trust follow what we see for patients who are low status on one diffuse status. Instead, in Wave III we find that these patients report lower trust in their provider than those in the referent pairing, and this difference increases as quality of care decreases. One response to this outcome is to simply ignore it, as it only appeared in one wave. If we for a moment assume that this is indeed a real finding, this points to an interesting avenue of research because it is not clear precisely what might be occurring in this dyad. Moreover, very little guidance for interpretation exists since trust in providers among ethnic minority women is rarely the center of empirical inquiry (see Sheppard et al. 2004 for once exception). We can speculate that there are at least three possibilities here. First, is that an underlying individual propensity is the cause, something that cannot be completely explained by status characteristics or social identity theory. Another possibility is that being dissimilar on two social identities, race and gender, is a distinct enough situation that is better explained by social identity than status characteristics theory. A third possibility stems from the literature on the "status liability" effect (Wiggins, Dill, and Schwartz 1965), which proposes that when expectations based on relative status are not met, the extent to which negative outcomes ensue is commensurate with the initial status differential. Because in this dyad the status differential was based on two salient diffuse statuses, it could have been strong enough to reveal a status liability effect that manifested itself as patient trust decreasing as quality of care does. All three of these explanations are consistent with the findings from Wave III, and additional research will be needed to distinguish among them or identify contemporaneous effects.

Lastly, this study informs our understanding of the relationships between these two well-studied theories. That these data were more consistent with status

characteristics theory is not a firm statement that this theory explains task groups better than social identity theory. The measures used could very well have tipped the outcome in favor of status characteristics theory. The data available restricted the analysis to patient perceptions of provider competence and how this shapes the competence component of trust. In another study that compared these two theories, Kalkhoff and Barnum (2000) found that perceptions of competence mediated the link between status differences and influence patterns, but not between social identity and influence. Instead, perceived similarities between group members were the source linking social identity and influence. Had the current exposition centered on questions about similarities and not competence, the conclusion may have been different. The results of the current analysis thus contribute to our understanding of when each theory fits data the best.

Table 3.1
Descriptive Statistics for Dependent Variable

	Wave 1[a] (N = 1,706)				Wave 2[b] (N = 1,362)				Wave 3[c] (N = 1,176)			
	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max
Trust[d]	4.38	.87	1	5	4.51	.79	1	5	4.51	.76	1	5

Source: 1996-1998 HIV Cost and Services Utilization Study
Notes: [a] Wave 1 was administered between January 1996 and April 1997

[b] Wave 2 was administered between December 1996 and July 1997

[c] Wave 3 was administered between August 1997 and January 1998

[d] Trust measured with the following question: "How much do you trust your doctor or clinic to offer you high quality medical care?" "Not at all = 1;" "A little" = 2; "Somewhat" = 3; "Mostly" = 4; and "Completely" = 5.

Table 3.2
Means, Percentages, and Nonresponses for Time-Varying Independent Variables

	Wave 1 (N = 1,706)[a]		Wave 2 (N = 1,362)[b]		Wave 3 (N = 1,176)[c]	
Variable	Statistic	% Missing	Statistic	% Missing	Statistic	% Missing
% Employed	36	.0	40	.0	40	.0
% Married	13	.0	13	.0	12	.3
% With Insurance		.2		.4		1.3
Private	35		36		34	
Public	65		60		59	
None	9		14		12	
Health						
Overall (0-10)	6.99	.3	7.06	.1	7.43	.0
Quality of Care (1-5)	4.01	.0	3.99	.6	4.08	.5
Quality of Life (0-10)	7.03	.5	7.07	.0	7.48	.2
Monthly Income in Dollars	1832	7.8	3352	4.4	1634	4.0
# of Mental Health Visits (%)		.3		.1		.2
None	72		74		75	
One or More	28		26		25	
# of Medical Visits (%)		1.1		.0		.1
None	13		10		8	
One to Three	18		26		33	
Four to Six	30		25		28	
Seven to Nine	13		14		12	
Ten or More	26		26		19	

Source: 1996-1998 HIV Cost and Services Utilization Study

Notes: [a] Wave 1 was administered between January 1996 and April 1997

[b] Wave 2 was administered between December 1996 and July 1997

[c] Wave 3 was administered between August 1997 and January 1998

Table 3.3
Means and Percentages for Time-Constant Control Variables (N=1,362[a])

Patient's Education in Years (0-22)	12.91	
Patient's Race		
White (reference)	53	%[b]
Black	29	
Latina/o	13	
Other	4	
Patient's Gender		
Male (reference)	71	
Female	29	
Physician's Race		
White (reference)	72	
Black	6	
Latina/o	3	
Other	19	
Physician Gender		
Male (reference)	76	
Female	24	

Source: 1996-1998 HIV Cost and Services Utilization Study
Notes:
[a] Sample size is after listwise deletion for variables included in Wave II models.

[b] Percentages within a category may not sum to 100% due to rounding.

Table 3.4.
Measures of Central Tendency, Reliability, and Factor Loadings for Mental Health Items

	Wave 1 (α = .91, N = 1,706)				Wave 2 (α = .92, N = 1,362)				Wave 3 (α = .91, N = 1,176)			
Item[a]	Mean	S.D.	PC	ML	Mean	S.D.	PC	ML	Mean	S.D.	PC	ML
Calm & Peaceful	3.684	1.397	.751	.693	3.839	1.397	.749	.690	3.977	1.362	.763	.717
Downhearted & Blue	4.115	1.416	.836	.830	4.406	1.352	.843	.840	4.516	1.291	.818	.809
Tired	3.327	1.559	.662	.579	3.593	1.472	.699	.628	3.684	1.448	.671	.593
Happy Person	3.937	1.401	.773	.732	4.131	1.340	.786	.746	4.233	1.318	.779	.743
Nervous Person	4.267	1.622	.731	.687	4.494	1.526	.734	.692	4.538	1.465	.725	.683
Energetic	3.816	1.536	.614	.527	4.054	1.478	.667	.590	4.074	1.474	.662	.581
Down in the Dumps	4.929	1.334	.790	.776	5.079	1.264	.804	.793	5.130	1.216	.777	.761
Anxious or Worried	3.947	1.539	.808	.787	4.213	1.478	.814	.788	4.312	1.422	.801	.769
Depressed	4.319	1.537	.859	.868	4.554	1.441	.871	.882	4.623	1.402	.875	.885

Source: 1996-1998 HIV Cost and Services Utilization Study
Notes: [a] Items are measured on a six-point scale and coded for consistency, such that higher values indicate better mental health.

Table 3.5
Percentages of Similar and Dissimilar States of Status Characteristics for Provider-Patient Dyads (N=1,362[a])

Gender			Race/Ethnicity[b]		
Patient	Provider	Percentage in Sample	Patient's	Provider	Percentage in Sample
Male	Male	54.6 %	White	White	38.0 %
Male	Female	16.8	Black	White	21.0
Female	Male	21.7	Latina/o	White	9.5
Female	Female	6.8	White	Other	10.3
			Black	Other	5.5

Source: 1996-1998 HIV Cost and Services Utilization Study
Notes: [a] Sample size is after listwise deletion for variables included in the Wave II models.

[b] Percentages for Race/Ethnicity dyads do not add up to 100 because I only report percentages for dyads greater than 5%.

Table 3.6
Wave I to Wave II Attrition Analysis

Wave I Variable	In (N = 1,362) Mean	S.D.	Out (N = 344) Mean	S.D.	Mean Difference[a]	
Provider Characteristics						
Female	.24	.43	.11	.31	-.13	***
European American	.72	.45	.73	.44	.01	
Patient Characteristics						
Female	.29	.45	.31	.46	.02	
European American	.53	.50	.42	.49	-.11	***
Years of Education	12.91	3.20	12.20	3.28	-.71	***
Employed	.38	.48	.27	.44	-.11	***
Monthly Income (dollars)	1916	1995	1498	1721	-418	***
Private Insurance	.37	.48	.26	.44	-.11	***
Public Insurance	.65	.48	.67	.47	.02	
No Insurance	.08	.27	.14	.34	.06	**
Married	.13	.34	.11	.32	-.02	
Health	7.10	2.20	6.55	2.41	-.55	***
Quality of Life	7.12	2.35	6.68	2.70	-.44	**
# Mental Health Visits	3.07	7.64	2.07	5.70	-1.00	**
Mental Health (factor score)	.04	.95	-.16	1.00	-.20	***
# Medical Visits	8.88	14.65	7.89	7.91	-.99	
Quality of Care	4.05	1.06	3.86	1.08	-.19	**
Trust	4.38	.86	4.37	.88	-.01	

Source: 1996-1998 HIV Cost and Services Utilization Study

*p<.05, **p<.01, ***p<.001 (two-tailed tests)

Notes: [a] Mean difference is the mean for respondents not in Wave II ("Out") subtracted from the mean for respondents in Wave II ("In"). Difference tests assume unequal variances.

Table 3.7 Wave II to Wave III Attrition Analysis

	In (N = 1,176)		Out (N = 186)		Mean	
Prior Wave Variable	Mean	S.D.	Mean	S.D.	Difference[a]	
Time Invariant[b]						
Female Provider	.25	.43	.15	.36	-.10	***
Wave I						
Employed	.37	.48	.40	.49	.03	
Monthly Income (dollars)	1932	1991	1816	2021	-116	
Private Insurance	.37	.48	.33	.47	-.04	
Public Insurance	.65	.48	.60	.49	-.05	
No Insurance	.07	.25	.15	.36	.08	**
Married	.13	.33	.16	.36	.03	
Health	7.15	2.19	6.81	2.23	-.34	*
Quality of Life	7.16	2.35	6.82	2.34	-.34	
# Mental Health Visits	3.19	7.77	2.31	6.75	-.88	
Mental Health (factor score)	.05	.95	-.02	.94	-.07	
# Medical Visits	8.92	14.92	8.59	12.83	-.33	
Quality of Care	4.08	1.03	3.87	1.21	-.21	*
Trust	4.40	.86	4.32	.86	-.08	
Wave II						
Employed	.40	.49	.39	.49	-.01	
Monthly Income (dollars)	3595	32290	1816	4869	-1779	
Private Insurance	.37	.48	.31	.46	-.06	
Public Insurance	.61	.49	.53	.50	-.08	*
No Insurance	.12	.32	.25	.44	.13	***
Married	.13	.33	.15	.36	.02	
Health	7.13	2.29	6.59	2.41	-.54	**
Quality of Life	7.15	2.50	6.53	2.66	-.62	**
# Mental Health Visits	3.16	8.47	4.73	19.40	1.57	
Mental Health (factor score)	.02	.95	-.16	1.06	-.18	*
# Medical Visits	7.84	11.27	8.90	17.28	1.06	
Quality of Care	4.02	1.04	3.82	1.13	-.20	*
Trust	4.52	.76	4.41	.93	-.11	

Source: 1996-1998 HIV Cost and Services Utilization Study

*p<.05, **p<.01, ***p<.001 (two-tailed tests)

Notes: [a] Mean difference is the mean for respondents not in Wave III ("Out") subtracted from the mean for respondents in Wave III ("In"). Difference tests assume unequal variances.

[b] Not shown are non-significant mean differences for patient's education (yrs.), gender and race/ethnicity; and provider's race/ethnicity.

Table 3.8
OLS Regression Coefficients for Cross-Sectional Analysis of Trust in Provider[a]

	Trust		
	Wave 1[b]	Wave 2[c]	Wave 3[d]
Provider's Race/Ethnicity (Reference = European American)			
African American	.061	-.010	-.122
	(.073)	(.074)	(.074)
Latina/o	-.079	-.001	.071
	(.101)	(.113)	(.123)
Other	.037	.029	-.081
	(.043)	(.046)	(.047)
Patient's Race/Ethnicity (Reference = European American)			
African American	.076	-.013	.049
	(.043)	(.044)	(.058)
Latina/o	.089	.018	.049
	(.054)	(.089)	(.058)
Other	.114	.018	.012
	(.081)	(.089)	(.087)
Female Patient	.105 **	-.013	.012
	(.041)	(.044)	(.045)
Female Provider	.076	-.048	.004
	(.042)	(.043)	(.042)
Quality of Care	.477 ***	.395 ***	.439 ***
	(.017)	(.018)	(.020)
Constant	2.212 ***	2.692	2.658
	(.191)	(.208)	(.250)
R^2	.376	.314	.354
N	1706	1362	1176

Source: 1996-1998 HIV Cost and Services Utilization Study

*p<.05, **p<.01, ***p<.001 (two-tailed tests)

Notes: [a] Models control for the following variables: years of education, employment status, monthly income (logged), health insurance status, marital status, self-reported physical and mental health, quality of life, and the number of visits to mental and physical health providers.

[b] Wave 1 was administered between January 1996 and April 1997

[c] Wave 2 was administered between December 1996 and July 1997

[d] Wave 3 was administered between August 1997 and January 1998

Table 3.9
Cross-sectional OLS Results from Regressing Patient Trust in Provider on Gender and Race Status Configuration

	Wave[a]		
	1	2	3
Status Configuration: Gender, Race of Provider; Gender, Race of Patient[b]			
Male, European American; Male, African American	.245 (.243)	.960 *** (.268)	.661 * (.295)
Male, European American; Male, Latino	.024 (.303)	.437 (.344)	-.437 (.358)
Male, European American; Female, African American	.338 (.248)	.214 (.283)	-.742 ** (.275)
Male, European American; Female, European American	.767 * (.365)	.714 (.382)	.597 (.392)
Female, European American; Male, European American	-.609 * (.298)	-.135 (.286)	-.318 (.337)
All Others	.278 (.183)	.385 * (.188)	-.075 (.198)
Quality of Care	.502 *** (.035)	.465 *** (.037)	.411 *** (.030)
Quality of Care * Status Configuration			
Male, European American; Male, African American	-.060 (.059)	-.202 ** (.070)	-.111 (.071)
Male, European American; Male, Latino	.000 (.075)	-.077 (.084)	.121 (.087)
Male, European American; Female, African American	-.067 (.060)	-.053 (.070)	.153 * (.068)
Male, European American; Female, European American	-.171 * (.085)	-.140 (.092)	-.111 (.090)

Table 3.9 continued

Female, European American; Male, European American	.135 * (.070)	.023 (.069)	.084 (.080)
All Others	-.037 (.043)	-.087 * (.045)	.021 (.047)
Constant	2.235 *** (.235)	2.337 *** (.241)	2.804 *** (.283)
R^2	.378	.312	.370
N	1706	1362	1176

Source: 1996-1998 HIV Cost and Services Utilization Study

*p<.05, **p<.01, ***p<.001 (two-tailed tests)

Notes: [a] Models controls for the following variables: years of education, employment status, monthly income (logged), health insurance status, marital status, self-reported physical and mental health, quality of life, and the number of visits to mental and physical health providers.

[b] Reference category: Male, European American; Male, European American

Table 3.10
OLS Coefficients from Regressing Patient Trust in Provider on Gender and Race Status Configuration in Pooled Sample (N = 3,528)

	Trust[a]	
Status Configuration:		
Gender, Race of Provider; Gender, Race of Patient[b]		
Male, European American; Male, African American	.787	***
	(.223)	
Male, European American; Male, Latino	.013	
	(.289)	
Male, European American; Female, African American	-.280	
	(.284)	
Male, European American; Female, European American	.646	***
	(.169)	
Female, European American; Male, European American	-.500	†
	(.266)	
All Others	.186	
	(.167)	
Quality of Care	.456	***
	(.036)	
Quality of Care * Status Configuration		
Male, European American; Male, African American	-.161	**
	(.046)	
Male, European American; Male, Latino	.006	
	(.068)	
Male, European American; Female, African American	.056	
	(.060)	
Male, European American; Female, European American	-.130	**
	(.039)	
Female, European American; Male, European American	.108	†
	(.058)	
All Others	-.036	
	(.038)	
Constant	2.499	***
	(.184)	
R^2	.351	

Source: 1996-1998 HIV Cost and Services Utilization Study

† p<.10, *p<.05, **p<.01, ***p<.001 (two-tailed tests)

Notes: [a] Model controls for the following variables: years of education, employment status, monthly income (logged), health insurance status, marital status, self-reported physical and mental health, quality of life, and the number of visits to mental and physical health providers. Model also accounts for clustering on both provider and patient.

[b] Reference category: Male, European American; Male, European American

Figure 3.1 Results from Cross-Sectional OLS Regression in Wave I Using Quality of Care to Predict Patient Trust by Status Configuration

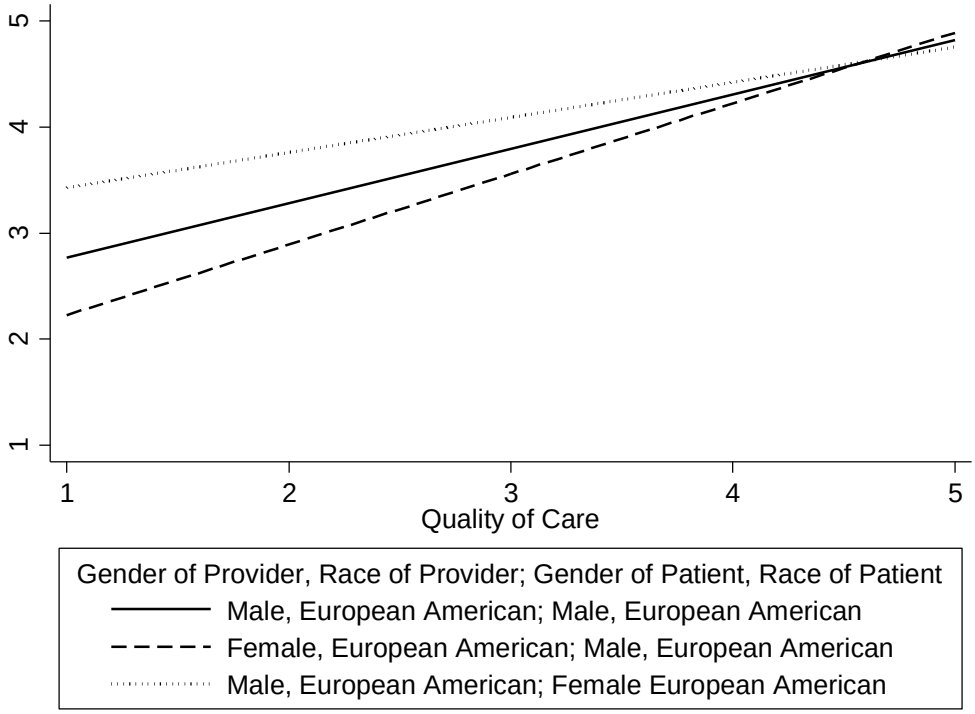


Figure 3.2 Results from Cross-Sectional OLS Regression in Wave II Using Quality of Care to Predict Patient Trust by Status Configuration

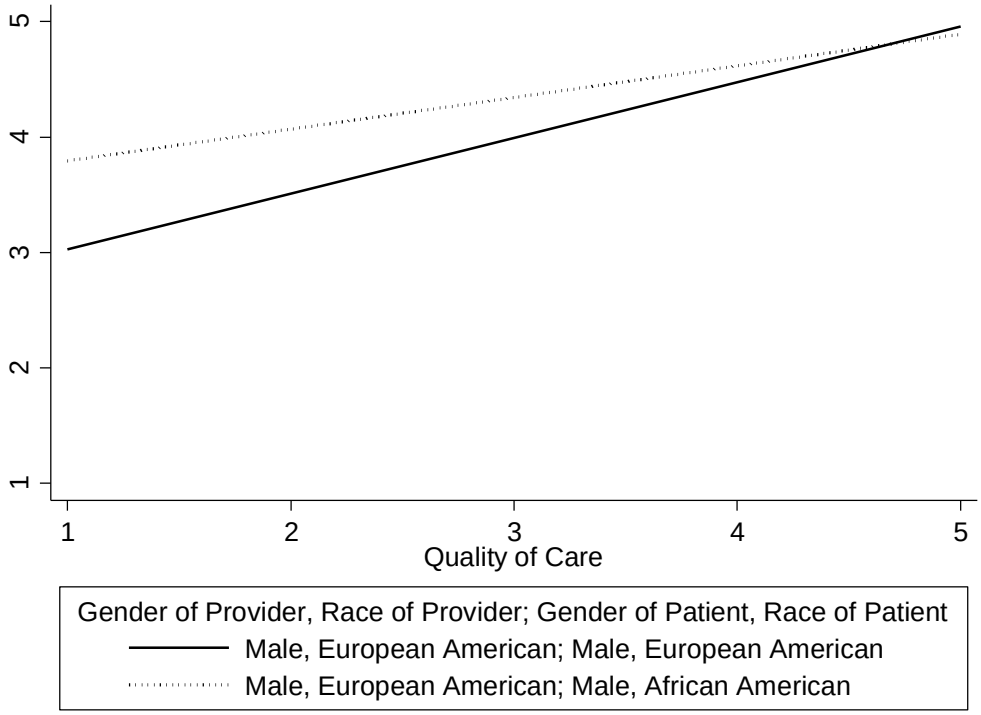


Figure 3.3 Results from Cross-Sectional OLS Regression in Wave III Using Quality of Care to Predict Patient Trust by Status Configuration

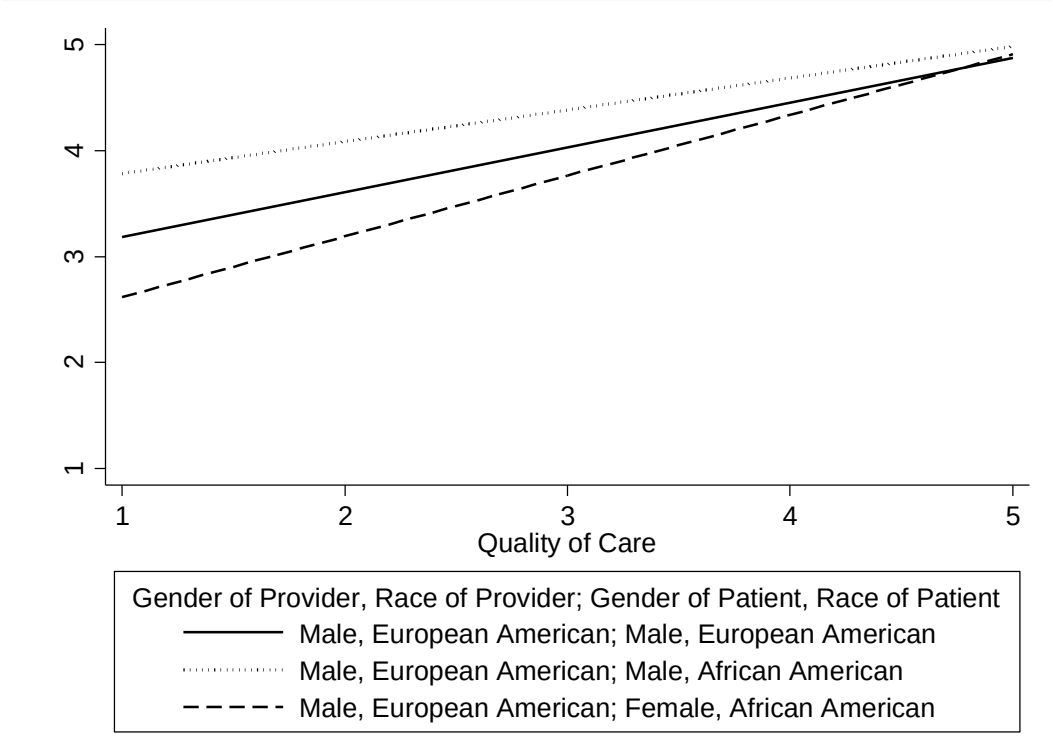
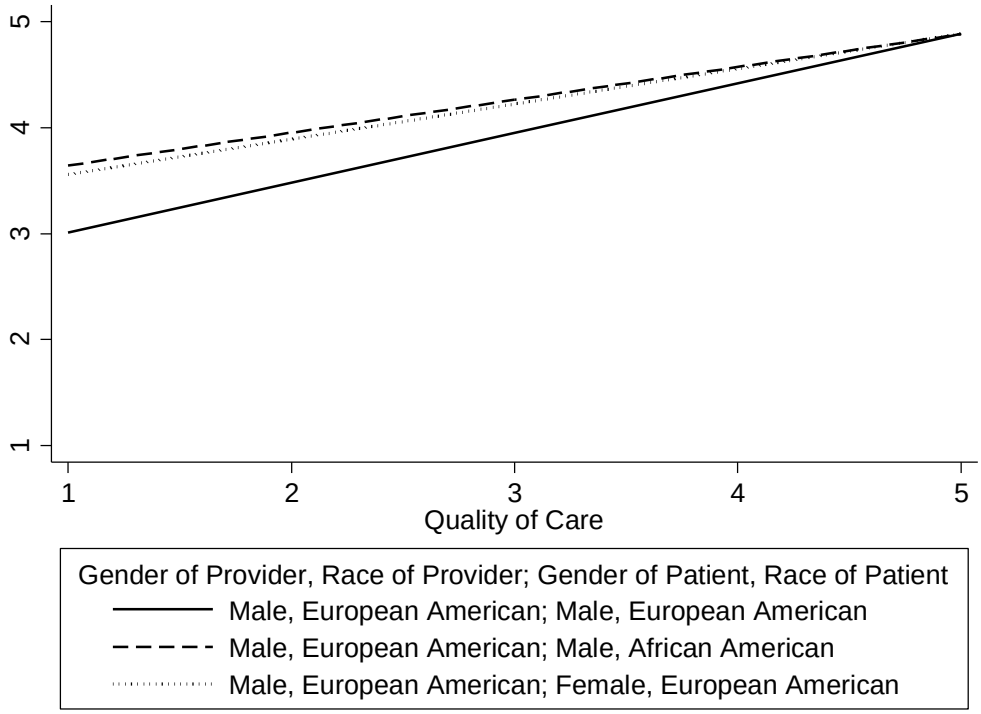


Figure 3.4 Results from Pooled OLS Regression Using Quality of Care to Predict Patient Trust by Status Configuration



CHAPTER 4: EXTENSION AND TEST OF THE THEORY TO UNDERSTAND THE BREAKING OF TRUST IN THE ADVICE-SEEKING SITUATION

While much research on trust has focused on how best to foster it, comparatively little has been conducted to understand how it is broken. Trust and trustworthiness that are based on one's status in a group could be difficult to lose, as status hierarchies are often difficult to change. Nonetheless, the status ordering of a group can and does change. The focus on this chapter is to identify under which circumstances status-based trust in the advice-seeking situation is broken, and how the process unfolds.

Unpacking why and how trust is broken in the advice-seeking situation contributes to our general understanding of trust in groups, but also to how trust operates in specific types of advice-seeking dyads. As an example, market-level changes over the past few decades (see Scott 2000) have altered the patient-provider relationship. From the perspective of the patient, we have observed a drop in patients' trust in their physicians (Mechanic 2000). At the same time, certain groups of patients – like racial and ethnic minorities (Doescher et al. 2002) – tend to have less trust in their physician than others, a difference that likely contributes to healthcare inequities (Schnittker 2004). From the perspective of the physician, the market-level changes are associated with decreases in perceptions of professional autonomy in managing a patient's care and career satisfaction (Landon, Reschovsky, and Blumenthal 2003). Explaining the process of trust breaking in the advice-seeking situation may thus grant us insight on mechanisms that sustain broader patterns of inequalities and their implications.

I review status characteristics theory (SCT) (Berger et al. 1977), a branch of the expectation states research program, to derive propositions about when and how trust breaks in the advice-seeking situation. SCT explains how status hierarchies are used to organize the task activity of groups, including groups that fall in the domain of the advice-seeking situation (as demonstrated in Chapter 2). Researchers in this area have shown how robust status hierarchies can be when group members perceive them to be legitimate (e.g., Ridgeway and Correll 2006), but also how the hierarchies can become delegitimated (e.g., Berger et al. 1998). I tested my assertions using a variant of the standardized experimental setting (Berger 2007) customarily used in the SCT theoretical tradition. The variant closely resembles that used in Chapter 2, with the exception that I included a procedure meant to break the research participant's trust in the task partner.

Theoretical Framework

Theories in the expectation states program state that macro-level systems, like widely-shared beliefs about racial inequalities, get imported into the local group context and shape interpersonal interaction through attributions of performance expectations. One branch, SCT, states that visible behavioral inequalities in groups, where interdependent members are motivated to achieve a discrete goal, emerge as a result of differential performance expectations. Specifically, members who are expected to perform better at the task than others are given more action opportunities, rated higher for their performance, perform more actions, and have more influence over group decisions than other members who are not expected to perform as well. These are all behavioral inequalities that are present during the advice-seeking situation, as shown in the earlier chapters.

Performance expectations can be directly related to beliefs about actual task ability or indirectly influenced by characteristics external to the group. Task ability differences are referred to as specific status characteristics as they are specific to the task at hand. For example, differences in math ability during a math problem-solving

situation would result in those with greater ability ranking higher in status and expected to perform better than those with lesser ability. External characteristics with at least two states that can be ordered according to the cultural value of each state are referred to as diffuse status characteristics. Group members who possess more valued states hold higher status in the group than those who possess the less valued states. For example, race is a differentially valued characteristic in our culture; European Americans are generally valued more so than those from other races (Cohen and Roper 1972). Gender is also a differentially valued characteristic in our culture, with men generally valued more than women (Ridgeway 2011). In task groups, members will tend to (non-consciously) infer greater task ability for members possessing higher valued diffuse status characteristics than members possessing lower valued ones. Consequently, an individual's performance expectation and the group's acceptance of influence attempts from the individual can be contingent on his or her status vis-à-vis other group members rather than a stable attribute of him or her.

Trust based on status expectations may be seemingly difficult to break down. On the one hand, high status actors are given the "benefit of the doubt" (Foschi 2000) and are expected to be good in *all* of their behavior (Wahrman 1970); principles of cognitive consistency causes us to assume good things from good people. We often attribute good outcomes to their personal actions and bad outcomes to the situation (Giordano 1983; Howard and Pike 1986), protecting them from hostility from others when they violate expectations (Cohen 1955). The institutional environment may even act to protect high status actors, as in the case of professional organizations assisting physicians who face medical malpractice suits (Schwartz and Skolnick 1962). On the other hand, high status norm violators have more to lose than low status ones, creating a "status liability" (Wiggins, Dill, and Schwartz 1965). Wagner's (1988) theory of status violations suggests that when high status actors violate behavioral expectations associated with their status position in the group, the other group members will work to maintain the status

hierarchy. They might, for example, provide the status violator with more opportunities to perform. If the process fails, then a "moral characteristic" gets added to the combination of status characteristics to update the hierarchy. As a result, high status group members who acted in a way that did not confirm their high position in the status hierarchy lost influence over their partners (Youngreen and Moore 2008). In addition, they can be seen as less competent and effective than a high status group member who did confirm to the expectations of the high position.

Under which conditions, then, would the status liability effect occur following a deviation from expectations? The length of conformity before the deviance might influence perceptions of competence and approval held by the other members (Hollander 1958, 1964; Shackelford, Wood, and Worchel 1996; Wahrman and Pugh 1972). Another condition that can influence the switch to either outcome is the extent of the norm violation. The high esteem held for high status actors cloaks them from possible punishment following a minor norm violation, but if the actor's actions prevent the group from attaining a goal, punishment increases systematically with the status of the actor (Wiggins et al. 1965). More generally, high status actors are expected to contribute the most to group activity toward a goal (Berger et al. 1977), thus we would expect that *the extent to which expectations are met interacts with status to determine the level of punishment following deviations from expectations.* Unpleasant behavior can produce annoyance, and more so when it is unexpected (Berkowitz 1960; Carlsmith and Aronson 1963; Wiggins 1965).

With respect to the physician-patient relationship, many of the physician behaviors associated with low patient trust revolve around breaking of the expectations held for physicians. Some of these include expectations that the physician will act in the patient's best interest (Anderson and Dedrick 1990; Mechanic 1996, 1998; Wallston, Wallston, and Gore 1973), will let the patient explain his or her story (Keating et al.

2002; Thom et al. 2001), and will inform the patient if a mistake was made in the treatment (Anderson and Dedrick 1990).

Thus, when an actor *O* breaks *P*'s expectations, the losses in *P*'s perceived trustworthiness of *O* and *P's* acceptance of *O*'s influence attempts are commensurate with the status differential between *P* and *O*, since influence is positively associated with perceived trustworthiness (Petty and Cacioppo 1986):

Proposition 1: P's loss of acceptance of influence from O following a broken expectation will be greater when P is low status than when P is equal status.

Proposition 2: P's loss in the perceived trustworthiness of O following a broken expectation will be greater when P is low status than when P is equal status.

In the next section, I will describe the experimental setting I used to test hypotheses derived from the propositions about breaking trust. All procedures took place at the University of Iowa's Center for the Study of Group Processes. As in Chapter 2, I conducted two separate studies that modify that standardized experimental setting of SCT (Berger 2007) to model the advice-seeking situation. I also tested to see how role-identities aggregate with other status elements. In Phase One, I used gender as a status characteristic (Ridgeway 2011) to manipulate the status of the research participant relative to a fictitious partner. In Phase Two, I introduced the role-identity and counter role-identity used in Chapter 2, the "decision-maker" and "diagnoser," to the group setting. The difference between these two studies and those in Chapter 2 is that the fictitious partner in the computer protocol is programmed to not meet performance expectations.

Phase One

Fifty female research participants were randomly assigned to one of two conditions, low status or equal status. Experimental procedures, status manipulation, and measures for Phase 1 were similar to those described in the experimental setting of Phase 1 in Chapter 2 (i.e., role-identities were not introduced in the procedures). Table 4.1

summarizes the status configuration for the conditions in this phase. I added one new measure of trust, described below, that was much more specific to this manipulation than the single one used in the studies of Chapter 2. The inclusion of procedures for breaking trust in the partner (described momentarily) in this iteration of the experimental setting increased the length of each study session from one hour to an hour and a half. Consistent with other experimental research conducted at the Center for the Study of Group Processes, research participants were compensated $15.00 for participating in a study of this length.

Breaking Trust

Consistent with my previous research on status-based trustworthiness (for example, the studies described in Chapter 2 and Chapter 3) that suggests perceived competency is a key substrate, the manipulation focused on disrupting the participants' expectations about the competency of their partner. In the video explaining the "Team Contrast Sensitivity Task," it was emphasized to the participants that each member of the dyad must make their initial choice within the allotted timeframe of a round. It was explained that they would complete 23 rounds of the task (as was the case in the procedures for the studies in Chapter 2), but in actuality they completed 28. No research participant expressed suspicion about the actual number of rounds that were completed. In the five additional rounds, the partner was programmed to not make an initial choice during the allotted timeframe.

Measures

The measures used in the analysis that follows are the same as those in the studies of Chapter 2. I included the trustworthiness question used, which was, "How much did you trust your partner to help you achieve the highest score possible?" (No Trust at all – Complete Trust). I added another trustworthiness question that was more specific to the manipulation used, "How much did you trust your partner to help to make the correct initial choice?" (No Trust at all – Complete Trust). Both questions were measured on 7-

point scales. In the analysis, I refer to the latter as specific trustworthiness in the partner and the former as general trustworthiness in the partner.

Hypotheses

H_1: Trust in the partner will be greater in the equal status condition than in the low status condition (i.e., a main effect of status on trust).

H_2: The ordering of the *P(s)* score for the two conditions will be as follows: low status > equal status (i.e., a main effect of status on influence).

Results

Test of Hypothesis 1

The means and standard deviations for the questions related to trustworthiness are summarized in Table 4.2. These questions include the general and specific trustworthiness questions described in the methods section of this chapter, as well as the questions about uncertainty and risk that I described in Chapter 2. T-tests revealed that for none of these measures was there a significant mean difference between participants in the low status (Condition 1) and equal status (Condition 2) conditions. These results fail to support Hypothesis 1, which stated that the study procedures would produce a status liability effect with respect to the participant's perceived trustworthiness of the partner.

Test of Hypothesis 2

Hypothesis 2 was about a statement about the manifestation of the status liability effect in the *P(s)* scores, which are summarized by condition in Table 4.3. I was unable to perform a Jonckheere-Terpstra test as I did in Chapter 2 because the test requires a minimum of three groups. I instead performed a t-test and found the *P(s)* scores for the two conditions (Condition 1: $M = .606$, $SD = .143$; Condition 2: $M = .646$, $SD = .191$) to be statistically the same $t(48) = .838$, $p = .797$, which fails to support the hypothesis. The ordering of the scores, however, is consistent with what I had hypothesized in that low

status participants are generally more accepting of their partners' influence attempts than equal status participants.

Ad-hoc Analyses

While I was unable to find support for the two hypotheses using the measures outlined above, I did find some support for a status liability effect when I made other comparisons. These are summarized in Table 4.4. I compared the *P(s)* scores from these two conditions to concomitant ones in Phase 1 of Chapter 2. T-tests revealed that the means of the concomitant conditions were statistically the same, but the trends of the mean differences are suggestive of a status liability effect. When I subtract the mean *P(s)* score of the condition in Chapter 2 (trust intact) from the mean of the condition in Chapter 4 (trust broken), the difference in the *P(s)* score is greatest for Condition 2. That denotes that when trust is broken, the difference in rejection of influence from that seen when trust is intact is greater among equal status participants.

In an additional analysis, I examined the participant's perceived trustworthiness of the partner in a future task. Participants were informed in the latter part of the post-test questionnaire to imagine that they and their partners were charged with organizing a classroom presentation in the future. The partner was delegated to make the presentation on the group's behalf, while the participant was charged with creating an outline. They were asked on 7-point scales: 1) how detailed they would have to be in their outline (Not at all Detailed – Extremely Detailed); and 2) how likely they would have to check-up on their partner while he or she prepared the presentation (Not at all Likely – Extremely Likely). A one-tailed t-test revealed that participants in Condition 2 ($M = 5.96$, $SD = .93$) rated that they would have to be more detailed than participants in Condition 1 ($M = 5.48$, $SD = 1.12$), $t(48) = -1.643$, $p < .05$.

Phase Two

As I did in the research summarized in Chapter 2, I examined how role-identities aggregate with a diffuse status characteristic like gender. Fifty research participants were

randomly assigned to one of two conditions: low status or equal status. Status was manipulated as in Phase 1. The experimental procedures and measures were the same as those described in Phase 1, with the exception that the role-identity, "decision-maker," and counter role-identity, "diagnoser," were introduced. The explanation and assignment of these two role-identities followed the same procedures as those described in Phase 2 of Chapter 2. A summary of conditions can be found in Table 4.5.

Hypotheses

H_3: Trust in the partner will be greater in the equal status condition than in the low status condition (i.e., a main effect of status on trust).

H_4: The ordering of the *P(s)* score for the two conditions will be as follows: low status > equal status (i.e., a main effect of status on influence).

Results

Test of Hypothesis 3

The descriptives for the trustworthiness measures can be found in Table 4.6. The perceived general trustworthiness of the partner was marginally greater in Condition 2 (M = 4.00, SD = 1.19) than in Condition 1 (M = 3.56, SD = 1.12), $t(48) = 1.346$, $p = .092$. The specific general trustworthiness of the partner was significantly greater in Condition 2 (M = 3.84, SD = 1.46) than in Condition 1 (M = 3.00, SD = .86), $t(48) = 2.471$, $p < .01$. The means for uncertainty and risk were statistically the same between the two conditions. Although the specific and general trustworthiness measures were statistically different, the ordering was opposite to that which I hypothesized.

Test of Hypothesis 4

The descriptives for the *P(s)* scores for the conditions in this phase are in Table 4.7. As I did in the first phase, I conducted a one-tailed t-test and found them to be statistically the same, $t(48) = 1.054$, $p = .851$. Moreover, the ordering was in the direction opposite to that of which I had predicted about the status liability effect on *P(s)*.

The presence of role-identities appears to create a trend that is inconsistent with the status liability hypothesis.

Ad-hoc Analyses

I performed ad-hoc analyses on the trustworthiness measures that were similar to those described in Phase 1, which are summarized in Table 4.8. I did not perform the analysis comparing the *P(s)* scores between concomitant conditions in this chapter and Chapter 2 because the role-identities in the studies of Chapter 2 did not aggregate as do other status elements.

Consistent with the previous analyses, these ad-hoc analyses show the opposite of a status liability effect when role-identities are introduced. Participants in Condition 1 rated that they would be more likely (M = 5.32, SD = 1.46) to have to check-up on their partner while he or she prepared for the presentation than those in Condition 2 (M = 4.64, SD = 1.55), $t(48) = 1.594$, $p < .05$.

Discussion

There is a paucity of research within the area of trust and trustworthiness about their breakdown. In this chapter, I sought to extend findings from earlier chapters about the emergence of status-based trustworthiness to form claims about how this type of trustworthiness breaks. Trustworthiness based on status differences is likely just as stable as the status hierarchies on which it is based. The results of two sets of laboratory experiments that modify the setting I used in Chapter 2 show the potential for trust to be broken, as well as the status generalization process itself.

As I detailed in Chapter 2, the advice-seeking situation is attenuating the effect of a status differential on *P(s)*. It could be that the advice-seeking situation is also attenuating the status liability process, which is consistent with the non-significant trends I found in Phase 1 of this chapter. Future research should examine these procedures using larger status differentials in the advice-seeking situation or in the customary group situation of SCT research.

Just as in Chapter 2, it is unclear how role-identities factor in the status liability process. Because of the lack of clarity in Chapter 2, it was difficult to develop hypotheses about role-identities in the studies presented in this chapter. The trends suggest that status liability does not occur when role-identities are present. Just as in Chapter 2, role-identities are acting as moderators in the link between status and group outcomes.

Neither risk nor uncertainty was significantly different between conditions in these studies. Seemingly, having a partner that was not responding in time created a comparable situation of risk and uncertainty in all conditions. Moreover, the means for these measures are in range of those that were recorded in the Chapter 2 studies. If we increased the level of risk in future modifications to the setting (as described in the discussion section of Chapter 2), perhaps we would find significant mean differences.

Lastly, the results from Phase 1 point to a fruitful avenue of research on how to break status generalization. Not shown in the analyses is that I asked participants on a 7-point scale to rate who had the greatest responsibility during the group task (1 = You, 7 = Partner). The means in all study groups reported in this chapter were between 2.08 and 2.40, which indicate that participants in all groups overwhelmingly believed that they had greater responsibility than their partner. The lowest mean was reported in Condition 1 of Phase 1, which was the situation where participants were low status and role-identities were not introduced. In general, the advice-seeking situation connotes a greater responsibility on the part of the advice-seeker than the advice-giver. Perhaps this differential responsibility is why the advice-seeking situation attenuates the status generalization process. It could be that a level of agency, while still maintaining collective-orientation, could be a key circumstance in breaking status generalization.

Table 4.1 Experimental Conditions for Phase 1 (Roles Absent)

Condition	Gender of Participant	Gender of Partner	Participant's Status
1	Female	Male	Low
2	Female	Female	Equal

Table 4.2 Mean and Standard Deviations for Trust Measures in Phase 1

	Condition			
	1		2	
Measure	Mean	SD	Mean	SD
General Trustworthiness of Partner	3.76	1.30	4.08	1.32
Specific Trustworthiness of Partner	3.68	1.22	3.84	1.07
Uncertainty	4.28	1.31	4.72	1.67
Risk	2.94	1.70	2.64	1.58

Note: There are 25 participants in each of the two conditions.
[a] The results of a one-tailed t-test show that the means of the two conditions are significantly different from one another ($p < .05$)

Table 4.3 Mean and Standard Deviations of *P(s)* for Experimental Conditions in Phase 1

Condition	Mean *P(s)*	SD
1	.606	.143
2	.646	.191

Note: There are 25 participants in each of the two conditions.

Table 4.4 Mean and Standard Deviations for Ad-hoc Analyses in Phase 1

	Condition			
	1		2	
Measure				
Difference in *P(s)* using Concomitant Condition in Ch. 2 (Ch. 4 Mean - Ch. 2 Mean)	.008		.040	
	Mean	SD	Mean	SD
Detail Instructions on Future Task[a]	5.48	1.12	5.96	.93
Check-up on Future Task	5.52	1.45	5.36	1.32

Note: There are 25 participants in each of the two conditions.

[a] The results of a one-tailed t-test show that the means of the two conditions are significantly different from one another ($p < .05$)

Table 4.5 Experimental Conditions for Phase 2 (Roles Present)

Condition	Gender of Participant	Gender of Partner	Participant's Status Based on Gender and Role-Identity
1	Female	Male	Low
2	Female	Female	Low

Table 4.6 Mean and Standard Deviations for Trust Measures in Phase 2

	Condition			
	1		2	
Measure	Mean	SD	Mean	SD
General Trustworthiness of Partner	3.56	1.12	4.00	1.19
Specific Trustworthiness of Partner[a]	3.00	.87	3.84	1.46
Uncertainty	4.64	1.44	4.72	1.40
Risk	2.80	1.78	2.72	1.62

Note: There are 25 participants in each of the two conditions.

[a] The results of a one-tailed t-test show that the means of the two conditions are significantly different from one ($p < .05$)

Table 4.7 Mean and Standard Deviations of *P(s)* for Experimental Conditions in Phase 2

Condition	Mean *P(s)*	SD
1	.596	.146
2	.549	.164

Note: There are 25 participants in each of the three conditions.

Table 4.8 Mean and Standard Deviations for Ad-hoc Analyses in Phase 2

	Condition			
	1		2	
Measure	Mean	SD	Mean	SD
Detail Instructions on Future Task	5.52	1.45	5.36	1.19
Check-up on Future Task[a]	5.32	1.46	4.64	1.55

Note: There are 25 participants in each of the two conditions.

[a] The results of a one-tailed t-test show that the means of the two conditions are significantly different from one another ($p < .05$)

CHAPTER 5: PROPOSED RESEARCH STUDY TO REFINE THEORY USING SEMI-STRUCTURED INTERVIEWS

The research described in the earlier chapters on the association between status and perceived trustworthiness in the advice-seeking group situation supported generally the assertion that status characteristics theory (SCT) could be used to understand how trust emerges and breaks in these groups. With respect to the emergence of trust, high status persons are perceived as more trustworthy than low status persons. When expectations are not met and trust is broken, the process unfolds as a status liability effect. I examined the theory in different settings and populations, which points to the generalizability of the assertions.

One benefit of testing theories across settings and populations is that it uncovers potential moderating variables that were not considered previously. For example, the outcome of the perceptual task in the experimental setting I used in the studies described in Chapters 2 and 4 carries less risk than the outcome of the healthcare management task in the secondary data analysis of the patient survey in Chapter 3. Moreover, previous research on patients with HIV and AIDS has documented that not all patients seek to reduce uncertainty (e.g., Brashers et al. 2000). As mentioned in the earlier chapters, both risk and uncertainty were linked previously to the emergence of trust (Kollock 1994; Molm, Takahashi, and Peterson 2000). Lastly, I will be using this opportunity to examine outcomes of trust, namely, the extent that the advice-seeker searches for additional sources of information. In doing so, I will be identifying patterns among the data that can be used to extend the theory of the advice-seeking situation.

As a follow-up to the research studies presented here, I propose to conduct in-depth interviews to assess how different patient groups represent trust of physicians symbolically. In particular, I will be paying close attention to how two substrates of trust, risk and uncertainty, are perceived differently across two patient groups: 1) primary care patients; and 2) patients recently diagnosed with a form of cancer. Previous qualitative research on patient trust has sampled primary care patients (e.g., Kuzel et al. 2004; Waterworth and Luker 1990), or those diagnosed with a form of cancer (e.g., Wright, Holcombe, and Salmon 2004) or other chronic conditions (e.g., Mechanic and Meyer 2000; Roberts 2002) singularly. Sampling both types of patients will allow for direct comparison between cases and facilitate the development of the theory. I will also be examining the patients' communication with the provider and information-seeking patterns outside of the medical encounter. Trust in a provider shapes these patterns, but so too does the extent that patients cooperate with other patients to share finite health care resources (Leydon et al. 2000).

Theoretical Framework

The project will take a symbolic interactionist stance, which is a perspective that emphasizes the process in which shared meanings are developed (Stryker and Vryan 2003). Blumer (1969) coined the phrase "symbolic interaction" to capture the proposition that individuals act toward things – objects, individuals, groups, behavior – based on the meanings held for them. These meanings arise through the process of interpretation during interaction. They can then be used to learn about ourselves and others (Mead 1934), as well as define who we are in a situation relative to others (McCall and Simmons 1966; Stryker 1980). It is having a shared understanding of our definition of a situation with others, be it "significant others" or a more abstract "generalized other" (Mead 1934), that gives us security in our interpretation (Giddens 1991).

Qualitative research is the method primarily associated with this Blumerian strand of symbolic interaction (as opposed to the emphasis on experimentation in the structural

symbolic interactionism strand collectively founded by Kuhn [1964], Stryker [1980] and Heise [1986]), and is the method I will be employing for this study. *Qualitative methods* is an umbrella term that encompasses a vast array of methods, such as archival analysis, conversation analysis, in-depth interviews, and participant observation. Unlike the methods used in the previous two chapters, qualitative methods tend to capture the "richness" of social life embedded in relationships, making them amenable to examining the shared symbolic meanings central to symbolic interactionism. Unlike Blumer (1967), I agree with Glaser and Strauss (1967) that these qualitative methods can be used not only to test theory, but also to generate theory in a manner similar to the empirical generalizations we have seen in the development of well known theories, such as status characteristics theory (see Cohen 1989 for a discussion). For this particular project, I will be looking for patterns in these data to develop assertions about how uncertainty, risk, and cooperation are differentially represented in the two patient groups.

Risk and Uncertainty

All forms of social relations entail some form of risk and uncertainty, but can vary in their degree (Molm et al. 2000). In exchange for deference, patients receive medical information from a provider that they can use to manage their health. Patients incur risk in the exchange because they could incur a net loss and not receive the expected return. Patients in the two sample groups could differ in their expected return.

Characteristic of much research on uncertainty in the social sciences is an assumption that it is as an unfavorable cognitive state that individuals are motivated to reduce (e.g., Berger 1987). Indeed, this assumption served as the basis for one of my hypotheses in Chapter 3. However, under certain situations uncertainty is actually a preferred state. Among patients with a chronic condition, for example, uncertainty can be seen as essential to maintaining hope (Brashers et al. 2000; Leydon et al. 2000). Since these patients at times cannot fathom not trusting their provider (Roberts 2002), the situation presents itself as an interesting case where uncertainty and trust do not have the

relationships documented in previous research on social exchange (Kollock 1994). I will be assessing in the interviews if preferences for uncertainty are related to trust in the provider, and seeking medical information over that received during a medical encounter.

Cooperation

Trust in a medical provider is often-cited as a precursor to the disclosure of essential information and the propensity to seek health information outside of the medical encounter (Leydon et al. 2000). However, there are features of the situation that are external to the patient-provider relationship that can shape communication and information-seeking patterns. Patients may identify the health care system as a case of a common-pool resource dilemma (or, *tragedy of the commons,* [Hardin 1968]), which is a type of social dilemma (Kollock 1998). In this situation, a set of individuals must share a finite resource pool. Patients view health information from a provider a scarce resource that needs to be shared among all fellow patients. A patient with cancer in one study stated, "The consultant said, `Have you got any questions?' and I had, but I felt that there was this huge waiting room filled with people." (Leydon et al. 2000: 320). As such, perceptions of cooperation among patients could shape communication and information-seeking patterns in addition to trust.

Method

I propose to conduct in-depth semi-structured interviews with primary care patients at a hospital system in the Northeast and patients diagnosed with cancer at the system's outpatient oncology centers. Initially, I will focus on recruiting a sample of 40 patients (20 patients in each group) that is homogeneous with respect to race/ethnicity, gender, and education. I will also focus on recruiting patients who are in a concordant provider relationship. These restrictions on the sample are to minimize the variation in the status differential between the patient and the medical provider, which previous chapters demonstrated are associated with trust. Specialist providers tend to hold greater prestige within the medical profession than primary care providers (Sandy et al. 2009),

but it is still not clear if this distinction is salient to patients. I am including questions to help clarify if this is the case for patients in this hospital system. Lastly, because length of relationships provides information about future behavior, I will seek to diversify the patients in both groups based on length of provider relationship.

Patients will be recruited using methods similar to those used in previous in-depth interview studies on the processes of interest (e.g., Leydon et al. 2000), and also those in place in the hospital system by other sociology researchers with physicians and approved by the Institutional Review Board. I will contact physicians in the hospital system and ask them to identify patients who are eligible to participate in the study. For the group of patients who are diagnosed with a form of cancer, I will ask physicians to identify patients whose cancer had been diagnosed in the previous six months. That restriction will allow me to assess how the processes I uncover are associated with the information needs for patients who are newly diagnosed.

The interviews will take place in a private room located in either the practice at which the patient was recruited or a nearby library. Interviews will be recorded and then transcribed. The files will be housed on a server that is only accessible by research team members. Participants will be compensated for their time in the form of a gift card to a major retailer in the area.

The questions will ask about the patient's general history with the institution of medicine. The questions about physicians will be in reference to the physician that the patient considers to be important to their care, but also in reference to the patient's general idea of a physician. The interview will be semi-structured, because, while I have grounding for the questions listed in the research I have henceforth summarized, there are still other processes that could emerge during the interviews. I will be including the following questions in the semi-structured interview:

1. What does "trust" mean to you?
2. In general, how do you determine whether you will trust someone?

3. What did you look for, if anything, when deciding which physician to see for your most recent visit?
4. What types of different physicians have you seen?
5. What qualities in a physician are important for you to trust him or her?
6. In what ways is trusting a physician different from or the same as trusting others?
7. How do you decide which questions to ask your physician?
8. What is important for you to get from your physician during your visits?
9. What would constitute a break in trust with your physician?
10. What other sources of health information do you use and why?
11. How do you decide if the health information your physician provides is applicable to you?
12. What do you notice about other patients who are in your similar situation?
13. Are there any cases in which you would not ask a question you had from a physician?
14. How do you decide if you want to see the same physician again during your next visit?

These questions and those that are used as follow-up will provide insight into potential moderating variables in the theory. The flexibility of a semi-structured interview will afford me the opportunity to revisit my preliminary notions of what processes are likely operating in these patient populations. Moreover, the results of the research will be useful for extending the theory to explain additional outcomes of trust and trustworthiness.

CHAPTER 6: CONCLUSION

The advice-seeking situation, a task group where the primary focus is to help a single member perform well on a task, is a well-studied situation in the literature, but has received little attention from group processes researchers. Status characteristics theory (SCT) is a group processes theory (Berger et al. 1977) that explains the formation of perceptions and organization of behavior among members of groups that are task- and collectively oriented. In chapters 2 through 4 of this dissertation, I described studies where I tested how well SCT applies to the advice-seeking situation. I also examined how SCT can be used to understand the emergence and break down of trust in these groups. I used a variety of populations and settings for these studies, which speaks to the generalizability of my claims.

The results of the studies lend support to my claim that SCT can be used to explain the formation of perceptions and the organization of influence in these groups. The advice-seeking situation is a special case of the types of groups that researchers typically study in the tradition of SCT (see Berger and Webster 2006 for one recent review). Testing a refinement of the scope condition of SCT extends the reach of the theory and points to avenues of integration between SCT and the rich literature on the advice-seeking situation. I have begun to execute this integration through examining how role-identities aggregate with other status elements in a task group setting.

The focal perception of the studies I presented in the dissertation was perceived trustworthiness. Previously, trustworthiness was conceived as a person-level attribute with little theorizing on how relational cues shaped its perception. In other research, I confirmed with another researcher that SCT can be extended to understand perceptions of trustworthiness among group members in settings that are typically researched in this tradition (Campos-Castillo and Ewoodzie 2012). In this dissertation, I was concerned with testing to see how this extension applies to the advice-seeking situation.

Implications for Theory and Practice

The research I have summarized in this dissertation was derived largely from literatures on groups in general and the patient-provider dyad. Integrating the two research areas extended our knowledge in both. With respect to the group processes literature, we now have impetus to question and test whether our current understanding of groups generalizes to the advice-seeking situation. I demonstrated this precisely in Chapter 2 and Chapter 4 when I applied the techniques of SCT to the modified experimental setting. The theory competition that framed the analysis of the survey data in Chapter 3 provides a template for dissecting under which conditions would one group processes theory best fit data from the advice-seeking situation over others. Competitions such as these not only contribute to our understanding of the advice-seeking situation, but also extend our knowledge about the group processes theories themselves. As I described in the discussion of Chapter 3, the theory competition provided additional support that SCT (and not social identity theory) is best used to predict outcomes for which perceived competency is a basis.

Making general claims about this specific group situation also better informs our theories of specific instances beyond that of the patient-provider dyad. Basic research like that in Chapter 2 and Chapter 4 is intentionally abstract to summarize a set of situations that fall under the specified scope conditions described in Chapter 2. Researchers interested in other dyads that fit the advice-seeking situation (e.g., student-teacher, lawyer-client) can instantiate these basic processes with the particular dyad in question.

Practitioners interested in developing interventions in these types of groups can use this basic research as a catalyst to ameliorate inequalities. Although the focus of this dissertation research was not in developing practical interventions, the primary theory I used to inform my studies has a strong history of being used to inform interventions. Elizabeth Cohen (e.g., 1994) has used SCT to create interventions in student learning

groups, for example. One concrete outcome of my research that could be used to develop interventions in the advice-seeking situation is the one I discussed in Chapter 4, which was emphasizing the agency of group members possessing low status characteristics.

With respect to the patient-provider dyad, much research has been conducted on the dyad, but very little theory about the dyad exists. The framework of Chapter 3 is one of few theoretical treatments. Applying what we know from the group processes literature to the patient-provider dyad contributed to a distinct understanding of patient trust that was not apparent previously. A patient's trust in a provider is not always "good." From the findings in Chapter 3, we now know that SCT can be used to understand patient trust, at least when trust is based upon perceived competency.

Practitioners interested in developing patient education programs can use the findings of this dissertation to create tailored interventions. Trust does not operate the same in every dyad. Based on SCT, it is the status differential of the patient and provider that shapes trust. It is not the socio-demographic background of solely the patient or solely the provider, but both. Taking the status differential into consideration is a more nuanced approach in identifying the target of certain interventions. For situations where the patient is low status, these patient education programs must consider that the patient may be over-trusting the medical provider. Conversely, when the patient is high status, these programs need to consider that the patient may be under-trusting.

A Quizzical Consolidation of Findings

As with the other predictions of SCT, the emergence of perceived trustworthiness is positively related to the status of the group member; as the status of the group member relative to the others increases, so does the perceived trustworthiness of the group member. The assertion was generally supported by the results of the laboratory experiments I have summarized. As I mentioned in these earlier chapters, it is likely that the advice-seeking situation attenuates the translation of the status differential to observable behaviors and measurable perceptions like trustworthiness. The secondary

analysis of the patient survey in Chapter 3 did support the assertion. It could be that the status differential brought about by the occupational prestige differences and direct task knowledge were sufficient enough to overcome the attenuation from the group setting and produce detectable differences in perceived trustworthiness. Or, it could be other moderating variables that I outlined in Chapter 5, which will need to be further examined. Besides those gaps that remain in this area of research that I identified in Chapter 5, there remain a few others. Some of these are based on analyses not included in the dissertation.

A Status Liability Effect?

It is not clear if the decline in perceived trustworthiness in the advice-seeking situation is an instance of the status liability effect, as I posited in Chapter 4. With the exception of one that I uncovered with post-hoc analyses, I did not find statistically significant patterns in the data I collected from the laboratory experiments described in Chapter 4. However, the trends when I compared these data to those from comparable conditions in the studies from Chapter 2 did lend support to my assertions. The trends suggested that the difference in the rates of rejection of influence when trust was broken compared to when it was intact was lowest when research participants were low status.

These trends that I described in Chapter 4 are inconsistent with the statistically significant findings from the survey analysis I presented in Chapter 3. Recall that in Chapter 3, I found that the unmet expectation of receiving high quality of care led to an increase in the reliance of salient status distinctions. Patients had less trust in their providers as perceived quality of care decreased, but at a different degree based on the status configuration of the patient-provider dyad. For example, when quality of care is zero, patients who were lower status than their provider on gender or race/ethnicity had more trust in their provider than patients who were equal status. Conversely, patients who were higher status had less trust than the patients who were equal status.

The question remains as to why these inconsistencies, but a return to the theoretical framework of Chapter 4 provides some insight. First, as I highlighted in Chapter 4, the length of conformity prior to the deviance can affect the onset of the status liability effect (e.g., Hollander 1958, 1964). Longer relationships, rich with history, can provide greater freedom to both parties. Patients responding to the actions of a high status provider whom they deemed as a "usual source of care" are more likely to grant the provider the benefit of the doubt than members of a zero-history dyad in a laboratory experiment. Second, the status liability effect tends to occur when it is clear that the deviant acts preclude successful completion of the group task (Wiggins et al. 1965). Perhaps the key here is the perception of the preclusion. Research participants in the laboratory experiments of Chapter 4 more or less believed that there was a correct answer to the task (not shown in the analyses is that there was some variability in this perception). It could be that the perception of preclusion among patients with a chronic and severe condition like HIV is a bit more ambiguous than that in the laboratory experiment. Each of these differences point to important modifying variables of the status liability process that will need to be considered in future research.

Trustworthiness Begets Influence?

Whereas trustworthiness is a perception, trust is the actual act of placing control in the hands of others. Not shown in the analyses for the studies described in Chapter 2 and 4 is that perceived trustworthiness was associated positively with the acceptance of influence attempts from the partner. The association replicates a classic proposition from Petty and Cacioppo (1986), this time in a group situation. Previous research that utilizes their elaboration likelihood model (ELM) has focused on non-group situations where the ability of a speaker (or some other communication source) to persuade the attitudes of research participants is measured (see Wood 2000 for one review). The situations examined with the ELM are not task-focused, yet it appears that the proposed association between trustworthiness and influence is applicable to a situation that is.

One possible explanation for this association is that trust in a group member in situations that fit the scope conditions of SCT can be conceived of as the expectation for that member's future performance. Trust, as I defined early on, is the belief that transferring control to someone will minimize risk. It is a forward-looking state of mind. Although much research in the SCT tradition has focused on the current states of groups, there is some research that looks at the future states of groups. In one line of research, for example, the expectation of joining a particular group in the future shapes how well potential group members perform presently on group entrance exams (e.g., Lovaglia et al. 1998).

This is not to say, however, that trust is a necessary prerequisite for the acceptance of influence. Medical adherence, for instance, can occur without the trust in the prescribing physician (Roberts 2002). The patient-provider dyad has served as an exemplar in this dissertation, yet there are certain situations in which the dyad presents itself as interesting exception to my propositions. In patients with chronic conditions, taking one's medications could be more of an act of necessity for improving quality of life as opposed to trust in a physician. Not mentioned in Chapter 3 is that I attempted to conduct an analysis on those data to assess how patient trust relates to medication adherence. I could not conduct the analysis because there was little variability in rates of medical adherence – the average rate for all dyads was above 94%. As described in Chapter 5, there are likely other correlates of trust and trustworthiness that become disassociated with trust among patients with chronic conditions, which speaks to the necessity for additional research in this area.

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