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Possession of Status Value: An Extension of Status Value Theory

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ABSTRACT

Through what mediums is it possible to spread status? Prior research shows that status can be inferred from reward states, status and expectations can spread from one valued characteristic to another, and that differences in the status value of an object possessed by an individual can lead to differences in power during exchange interactions. However, it is not known if possession of these objects actually results in increased status and expectations for an individual possessing the status valued object. Building on Status Value Theory, Status Construction Theory, Reward Expectations Theory, and the Status Value Theory of Power, I construct a theoretical extension to Status Value Theory that proposes that objects are able to temporarily transfer status via possession.

In this thesis I lay out the theoretical extension, referred to as the Possession of Status Value Theory, and provide results from an experiment done on Amazon's Mechanical Turk platform. Results provide partial support for the theory, showing that the status value of objects possess by high status others is acknowledge by future recipients of a status valued object. However, status value transfers only when the participant possesses the high status valued object, and expectations transfer only when their partner is possesses the high status valued object. In addition, low status valued objects seem to have a floor effect for how little status value they contain and how low the expectations individuals have for themselves and others can fall because of

possession. The thesis concludes with a discussion of these findings, proposing 3 possible explanations for the results, and future directions for this research.

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CHAPTER 1

INTRODUCTION

Can possession of an object lead to greater or lesser status for an individual? Status, often thought of as prestige or honor, is a primary line of categorization for human interaction. Humans use it to select leaders (Berger et al. 1977; Ridgeway and Berger 1986), distribute resources (Berger et al. 19851), and influence each other (Berger et al. 1977). In fact, status is even considered when forming reciprocal friendships (Frank 1985; Ball and Newman 2013) and selecting romantic partners (McPherson et al. 2001). Previous research has indicated that the value of objects an individual possesses is also influenced by their status (Thye 2000; Thye and Harrell 2016). However, in this study I am interested in the reverse, does possession of an object lead to greater or lesser status for an individual?

We know that humans use objects in everyday life to expressive themselves. Objects can be used as tokens for an individual to demonstrate something not physically observable, be that status (Fisek et al. 2005), characteristics or attributes not externally seen (Fisek et al. 2005), or illustrations of our identity, personality, or character (Sliver 1996). However, it is still unclear if status is actually gained from possession of these objects. Assuming that individuals do gain status from possession, it is unknown if possession of a status valued object would behave similarly to possession of a characteristic. In addition, we know little about how status value, both positive and

negative, transfers from individuals to objects, or from interaction to interaction, and over long periods of time.

The ability for objects to confer status or other attributions to an individual is not a new line of theory or inquiry. Thorstein Veblen discusses this phenomenon at the turn of the 20th century, presenting a theory claiming that Americans chase spending trends of upper class individuals in order to present themselves as higher in social class (Veblen 1899). Veblen's illustration of this specifically focuses on Middle Class Americans and their willingness to spend large amounts of money to imitate spending habits of higher social classes, often purchasing clothing, taking vacations, and participating in leisure activities that are common among upper class individuals. Veblen also proposes that, over time, this actually causes upper class cultural trends to become more extreme or change to different practices in order to further distinguish themselves from the middle class.

More recently, Sociological Social Psychologists have become interested in objects and the effects of their possession. They have found that that possession of higher status characteristics in an exchange interaction increase the exchange value of objects these individuals hold (Thye 2000; Thye and Harrell 2016). Although these studies typically look at characteristics of an individual, such as age, sex, and education, the resulting theories they use do lend important concepts and insights into if and how objects are increasing an individual's status.

1.1 RESEARCH QUESTION

Does possession of a status valued object confer status to those that possess it? And does the conferred status provide expectations for performance that are similar to

those we could normally expect from possessing a status characteristic? Status, in these research questions, is defined as perceived prestige or honor (Berger et al. 1977). A status valued object refers to an object that has worth, prestige, or honor attached to it (Thye 2000; Thye and Harrell 2016). For example, Stradivarius Violins, Italian Violins crafted by members of the Stradivarius family, are highly prized by collectors and musicians. This common preference is derived from their association with the Stradivarius family and their reputation for producing high quality string instruments, a as well as from repetitive possession by high preforming violin players. However, although the instruments are highly prized, there is no evidence that they are superior to modern violins in sound quality, ease of use, or any other objective criterion (Belluck 2014). Instead, theses violins seem to be prized because they have accumulated status value. The possessor of such an instrument is viewed as having attained higher status purely by virtue of possession. Indeed, possessing a Stradivarius instrument conveys status somewhat independently of the means used to acquire it, as both purchasing an instrument outright or being loaned such an instrument by its owner convey status to the holder. Thus, the value of a Stradivarius instrument derives primarily from the impact it has on one's status, rather than from anything intrinsic to the instrument itself.

Often objects, such as the Stradivarius violin, take a substantial amount of resources or effort to obtain. This amount of effort and resources used to obtain one is typically considered a signal of their value to the individual and they are expected to be a reflection of the individuals status and influence (Veblen 1899). And this does not only extend to objects, as individuals will also spend large amounts of resources to be associated with high status others or be a part of high status groups (Frank 1985). In

addition, these objects may serve as a signal to others of some unobserved or not immediately notable trait, a kind of ability, position of importance or legitimacy, or an amount of power.

Signaling behaviors have also been studied in other contexts. Research in both Biology and Economics have used these concepts under the label of Costly Signaling Theory (Spence 1973), which proposes that individuals and groups use their resources or characteristics to signal their power, competence, and willingness to cooperate. In order to display such costly behavior signals, the resources available must already be abundant for the waste to be sustainable. This abundance indicates already present power and ability. Examples include work on resource exchange situations in which individuals gift resources they hold to signal trustworthy behavior, hoping to get better exchange deals in future interactions (Gintis et al. 2001; Fehr and Gächter 2002). There is also research that similar traits are used by non-human species to find mates (Searcy and Nowicki 2005). In effect, there is precedent for thinking of objects as mechanisms for signaling status or ability to others, and this exists across many domains of inquiry.

CHAPTER 2

THEORETICAL BACKGROUND

To understand the concept of status value and its operationalization, I will review a selection of major theories from the Expectation States Research Program. In addition to this, I will also review the concepts of status and power as they are presented in the Status Value Theory of Power. The Expectation States Research Program is concerned with how expectations are created for individuals involved in collective interactions and how these expectations shape hierarchies of status and prestige. There are four theories from the Expectation States Research Program that apply directly to this work. They are Status Characteristics Theory, Reward Expectations Theory, Status Construction Theory, and Status Value Theory.

Status Characteristics Theory (hereafter SCT) is a branch of the Expectation States Research Program that is used to explain the formation of status hierarchies in groups and the expectations that form around them (Berger et al. 1972; Berger et al. 1974; Berger et al. 19852). The theory proposes that performance expectations are formed from differences in status between individuals (Berger et al. 1977). Performance expectations themselves are beliefs about how an individual possessing certain characteristics will perform. These expectations are shaped by an Observable Power and Prestige Order (hereafter OPPO), a hierarchy that is ordered by individuals' status relevant to the rest of their group and reflects expectations for performance. The OPPOs are typically noticed and enforced by specific behaviors, such as deference, difference in

performance opportunities, differences in rewards for performance, and increased likelihood of holding leadership positions.

OPPOs are formed from Status Characteristics, which are attributes that form around differences in cognitions and evaluations (Berger et al. 1977; Berger et al. 2015). These characteristics possess status value, which confer status onto an individual that possesses them, and can be one of two different types, diffuse and specific. Diffuse Status Characteristics are attributes an individual possesses that are positively or negatively evaluated; they are perceived as instrumental to a task, and carry performance expectations that generalize to a larger social setting. Examples such as race, age, and education would be considered diffuse characteristics. Specific Status Characteristics are similar to diffuse, except their evaluations are not generalizable in a larger social setting. Characteristics such as math, writing, and woodworking ability would be considered specific characteristics. However, characteristics that an individual possesses are not the only thing that contributes to the formation of expectations. Some characteristics are not visible or salient in interactions but can be brought up and made salient through the use of Status Cues, including styles of dress, speech, or behavior that are used to infer a Status Characteristic (Fisek et al. 2005). Examples of this would be a college class ring as an indicator of education or an expensive watch as an indicator of income.

Characteristics not only influence expectations and an individual's position in a hierarchy of their peers, they also have a strong influence on the distribution of rewards to group members and how rewards are expected to be distributed in a wider social context. Reward Expectations Theory deals specifically with this phenomenon, studying how interactions between characteristics and expectations influence the distribution of

goal objects. These can be positions, privileges, and resources or physical objects that can be exchanged (Berger et al. 19851). Goal objects are typically distributed by referential structures, which are socially legitimate sets of principles that designate how goal objects should be distributed (Berger et al. 1977; Berger et al. 2014), and are typically based on salient characteristics, such as race and gender (Ridgeway and Berger 1986). The process of reward allocation can also confirm status. This is done by an individual with no information on another's status characteristics or how those characteristics are interoperated in a wider social context. Reward Expectations Theory proposes the people infer the referential structure that caused that distribution of rewards from visible attributes, such as status characteristics. They then infer the status and expectations attached to characteristics from that structure (Cook 1975; Berger et al. 1977; Berger et al. 2014). This is often referred to as the reverse process, and is vital as a mechanism for theories that propose paths or discuss ways in which status characteristics are created.

There are two proposed methods by which status characteristics are created, doubly dissimilar encounters and diffusion from existing characteristics, both of which use some form of the reverse inference process described above. Status Construction Theory utilizes the process of doubly dissimilar encounters, in which at least two individuals interact on some task, while also possessing different levels of a nominal characteristic and goal objects or resources (Ridgeway 1991, 2000; Ridgeway and Erickson 2000; Webster and Hysom 1998). Over time these interactions form expectations for levels of the nominal characteristic and are spread to others through interaction with individuals that were in the original doubly dissimilar encounter, or through explicit teaching of the expectations.

Status Value Theory (or Diffusion of Status Value Theory) is a response to Status Construction Theory and proposes that status and expectations can spread between an existing status characteristic and a nominal characteristic if both are possessed by the same individual (Berger and Fisek 2006). Similar to Status Construction Theory, repetitive interactions cause status and expectations to be transferred from one characteristic to another, creating value for those characteristics. Following this transfer, the new status characteristic can then stand on its own and is used in future interactions to imply status, expectations, and rewards (Berger and Fisek 2006). In addition to status spreading to nominal characteristics, the theory goes a step further and proposes that status and expectations can also spread to objects. Once the status value is of the object is successfully established it can be legitimated from repetitive behavioral affirmation in the general population (Ridgeway and Berger 1986, Zelditch and Floyd 1998). Numerous studies and a computer simulation have shown that both types of interactions will foster status beliefs (Ridgeway 1998; Ridgeway and Erickson 2000; Ridgeway and Balkwell 1997; Walker et al. 2011). Regardless of the mechanism, as the beliefs about the characteristics spread into the larger population, they will tend to achieve consensus acceptance. This is because those using them think of these beliefs as legitimate ways to infer expectations, status, and rewards (Zelditch and Floyd 1998; Kalkhoff 2005; Johnson, Dowd, and Ridgeway 2006; Zelditch and Walker 2000).

In addition to differences in the status and expectations between levels of a status characteristic, there may also be differences in exchange power. The Status Value Theory of Power joins together ideas from the Expectation States literature, as well as theories on power and exchange. It predicts that individuals in possession of higher valued status

characteristics will also have an increase in the value of their exchangeable resources, regardless of the actual monetary value of the resources. This in turn would give individuals with greater status more power in exchange relationships, allowing them to be more selective when picking exchange partners, and demanding more in exchange for their resources (Thye 2000). Additional studies have found that this increase in exchange power also provides greater influence outside of the exchange relationship (Thye, Willer, and Markovsky 2006).

A series of experiments have confirmed these predictions, showing that higher status individuals are able to extract more resources from lower status partners in exchange for resources they possess (Thye 2000). In addition, a recent study manipulated the number of salient characteristics differentiating individuals (one vs. multiple) and the distinctness of resources (same colored objects vs. different colored objects). They found that reducing the number of status characteristics distinguishing actors to a single characteristic still supported the initial theory (Thye and Harrell 2016). In support of status value's connection to more abstract concepts, Harkness (2017) found that differences in reward levels, the amount one is compensated for a task, behave similarly to status characteristics and are used to infer expectations.

2.1 STATUS VALUE IN THE EXPECTATION STATES PROGRAM

Connecting all of these theories is the concept of status value. Status value is present in the formation of status hierarchies (Berger et al. 1977), in the characteristics found in doubly dissimilar encounters (Ridgeway 1991, 2000), and in the diffusion of status from a valued status characteristic to a nominal characteristic (Berger and Fisek

2006). All of these situations incorporate status value by either creating status value for a characteristic, or from the inference made through referential structures.

SCT and Reward Expectations Theory interprets status value as the abstract worth that society gives to an object or personal characteristics (Berger et al. 1977; Berger et al. 2015; Berger et al. 19851). For a diffuse characteristic this is fairly straightforward; it is interpreted as salient during all interactions and has a concrete value structure associated with it to infer how an individual will perform at certain tasks. For a specific characteristic this is different, as the relevance of the characteristic does not generalize beyond a specific set of interactions (Berger et al. 1977). This also means that the status value and expectations for such a characteristic would be restricted to the same set of interactions. For example, individuals with high musical ability are not also assumed to be highly intelligent.

Reward Expectations Theory applies these concepts a bit differently. For Reward Expectations Theory status value is applied to reward allocation and valuation of goal objects distributed after a task is completed. Those in possession of high states of a status characteristic are expected to perform better at a task and contribute more. Because of this they are adequately compensated for their expected performance, which is tied to the status value of their characteristics. However, often goal objects are distributed before performance expectations are known to observers or future individuals that will be in a similar interaction. In these cases, instead of allocating goal objects by the expectations that come from an individual's characteristics, the reverse is done. Expectations are inferred by the rewards an individual possesses with the assumption that they are indicators of ability. In this reverse process, the rewards already allocated indicate the

status value of the characteristics an individual possesses (Berger et al. 1972; Berger et al. 1998). By using knowledge from an observed situation as a referential structure and the individuals involved as referential actors, it is assumed that similar others will also have the same allocation of resources, abilities, and expectations.

Status Construction Theory and Status Value Theory focus on the creation of status value. Status Construction Theory does this via doubly dissimilar encounters (Ridgeway 1991, 2000). Status Value Theory proposes that, in addition to doubly dissimilar encounters, the existence of a status valued characteristic and nominal characteristic by the same individual would be enough for status value to spread from one characteristic to the other via association (Berger and Fisek 2006, 2013). In both of these theories it is the presence of a difference in resources, or already valued characteristics and the presence of a nominal characteristic, which creates and spreads status value. The actual possession of a status valued object as the differing factor has not been theoretically or experimentally explored.

CHAPTER 3

POSSESSION OF STATUS VALUE THEORY

We know a great deal about status and characteristics or items associated with status. Literature proposes and tests many theories on status's creation, it spread, and its effects on interactions (Webster and Walker 2017). However, in Veblen's discussion of the concept of Conspicuous Consumption, it is proposed that possession of a status valued object brings an individual status, along with power and legitimacy in their social position (Veblen 1899). We know that individuals will spend large amounts of money and effort to possess objects they feel are associated with their status in society or the status of higher social classes and that these behaviors also occur at the micro level within group interactions. However, questions relating to gaining status, especially temporarily, from possession of a status valued object have not been answered.

To answer these questions, I propose an extension to Status Value Theory that focuses on object value, possession, and transfer. Based on previous work, it seems likely that status valued objects can be used to distinguish individuals in terms of status and expectations. In this instance object are used as a reference for expected status and expectations, is similar to the reverse process outlined in Reward Expectations Theory. And allows status and expectations to be attached to an object instead of an individual.

Formally, I propose that a status valued object acquires status in the initial interaction which it is part of, and that the status value attached to the object can be temporarily gifted to an individual possessing the object. When an individual is

possessing a status valued object, is serves as a reference to a referential structure that was created during an observed interaction. This would be expected to increase their overall status regardless of existing status characteristics. The increase in overall status would also increase their performance expectations that individual holds for themselves, and others hold for them. However, once the object is no longer in their possession the reference to the referential structure is also removed, resetting their status and expectations to levels similar to before possession of the object.

This process of temporary possession could be continued with new individuals possessing the object and being gifted status and associated expectations through possession of the object. In addition to this, I propose that it is possible not only for high status value, but also low status value to spread from an object to an individual. Similar to the process described above, we would expect an individual with a low status valued object to have their status decreased along with their expectations.

The proposed extension focuses on situations that involve at least two interactions, complete turnover in actors participating in the interaction, and salience of an object and its status value. Actors infer status value from observation of others, treating them as *referential actors* (Berger et al. 1998). Beyond this state, the status value of an object should be able to transfer status to new situations on its own, without the need of a diffuse or specific characteristic as long as the status value and a reference to its creation is salient. Markovsky, Berger, and Smith (1984) demonstrate that status interventions persist across task situations and interactants, with a decay function over time. I assume the same mechanisms would be true for this theory.

These outcomes are expected to happen if the conditions under which an object initially gains status value are known to those interacting with the object as possessors and observers of an interaction. In other words, if objects are present in an interaction which is not made public to other individuals, then the object cannot be expected to spread status and expectations to others. We would also not expect the object to spread status and expectations if it is not valued by observers of the initial interaction, as they would have no reason to care about and keep track of the object. This could be because the object is not unique enough to be noticed, or because its notoriety gets lost in multiple other stimuli occurring in an interaction.

In addition to this there are several scope conditions for this theory. First, it is expected that there are at least two distinct objects possessed by different individuals. This is needed to make the comparison between situations as equal as possible, as lack of an object by one actor would create a difference that is not the focus on the theoretical mechanism. For example, an instance where one actor has an object and another does not, could accidently indicate status or value related to an attribute of the individual instead of the object. Although this does not mean that the objects can't be the same thing, such as two violins, they must be distinguishable. Second, actors are differentiated only by the object that they possess. Third, actors in the initial interaction perform differently on a task in a way that is salient and severe enough to create different expectations for future performance. In other words, it is expected that one actor does quite well at a task compared to another. A formal theory section with clear layouts of each proposition and derivation, definitions, and a theory diagram is included in the appendix.

3.1 HYPOTHESIS

To test the initial parts of this theory, specifically the ability of status value and expectations to spread to an object and back to an individual, I propose the following hypotheses.

H1: Observed differences in an interaction between two referential actors in which one preforms better than the other will increase the status value of objects held by the high preforming actor.

H2: Possession of a high status valued object will increase an actor's status during a collectively oriented task.

H3: Actors in possession of high status valued objects will have higher performance expectations.

CHAPTER 4

METHODS

This study uses a 4-condition experimental design. The design results in two conditions in which the status of the valued objects was equated, and two conditions in which the status of the valued object was not equated. In these unequal conditions, one assigns the participant the high status object, and the other assigns their partner with the high status object. See table 4.1 for an illustration.

Table 4.1 Conditions

		Actor object value	
		Low Status Value	High Status Value
Other Object Value	Low Status Value	Condition 1	Condition 3
	High Status Value	Condition 2	Condition 4

The high and low status valued objects used in this experiment are geometric shapes and symbols obtained from a free online icon library (https://www.iconsdb.com/). These shapes and symbols are referred to as avatars during the study and will henceforth be referred to by the same term. The avatars were pretested as part of a set of 20 to select the ones that were the most similar and most attractive to a sample population. The goal was to select the avatars that had the highest attractiveness and were the most similar in terms of their rating. It was expected that this would lead to avatars that are rated as

similar in terms of attractiveness during typical interactions. To decide which were the most similar, a short pilot study was conducted to norm the avatars, illustrating the baseline attractiveness for each. In the end, four avatars were selected. These were the aperture, sun, light, and eye avatars. The final avatars are shown in figure 4.1. The sun and aperture avatars were selected as status valued objects. Additional information about the norming study, including detailed methods and the results, are provided in the appendix. In addition to the norming study, a study pilot using the same population was carried out before putting the study online to make sure all aspects of the study functioned as intendent.

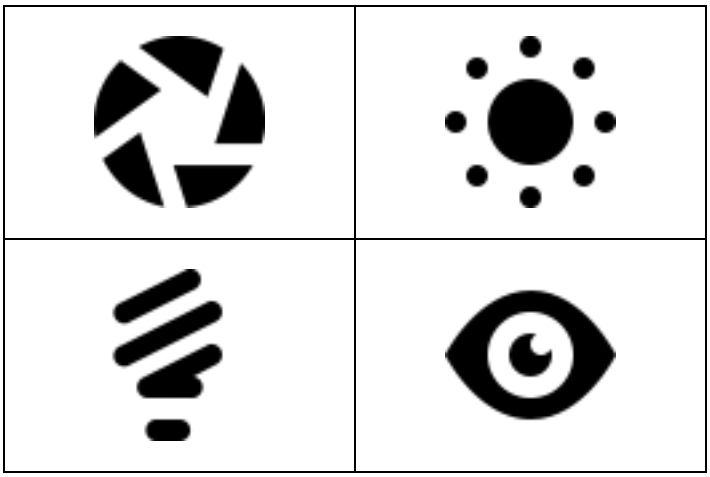

Figure 4.1 Final Study Avatars

Before the study launched, changes were made to allow for counterbalancing of avatars used as status valued objects. This meant that when some participants took the study, the sun avatar was the high status valued object. When others participated, the aperture was. This was done to ensure that the mechanism being tested was the actual spread of status value instead of personal attachment to the avatars or preference for a geometric shape or pattern.

Significant differences are found between the video versions created for counterbalancing. Individuals in the video version which the aperture avatar was using as the high status avatar reported a higher mean on the Status Value scale when rating the observed interaction, indicating that the aperture avatar was valued more than the sun avatar by participants. However, when comparing between the low status avatars it is found that this video version also has its low status avatar, in this case the sun avatars, rated as higher compared to the other video version. Taking this into account, both avatars are rated as having greater status value in this video version. The actual differences between high and low status avatars in both video versions are insignificant, leading to the conclusion that counterbalancing had no additional effects other than isolating the mechanisms of interest.

The experiment was carried out using Qualtrics, a popular survey and vignette experiment platform. Participants for the experiment were recruited using Amazon's Mechanical Turk (hereafter mTurk), a worker recruitment website that is actively used for both simple programing or transcription tasks and research[1]. A total of 192 participants are included in the study, 48 in each condition. The number of responses collected was around 204. However, drops were made because some individuals failed suspicion checks, and additional drops were made to equate cell sizes for conditions[2]. All

[1] During data collection mTurk had a verification issue in which individuals were able to take studies using the same IP address if they switched mTurk accounts, effectively getting around ballot box stuffing measures put in place by Qualtrics. Although the issue has been patched, this did increase the drop rate for this study. After the second wave of data collection the issue was noticed and if an IP address was found to be the same as an earlier one then the participant was dropped from the dataset and they were not paid for additional attempts to take the study. Instead they were sent a message manually through the mTurk website that informed them that their IP address was already attached to a previous response to the study and that they are only able to participate once.

[2] Drops were made to equate all conditions to the condition with the fewest observations. This was condition 4, which had 48 observations. To equate conditions: 5 observations were dropped from condition

drops to equate condition sizes were done using a random number generator that generated an ID number from those available in the overrepresented condition.

The experiment was divided into two parts. The first part introduced the avatars, the task, and the scales used to rate performance. The avatars were introduced as a status valued object via a video. This video was introduced as being from a previous interaction between two individuals that had taken the study. It was noted that during the previous interaction the only thing distinguishing them is their possession of an aperture or sun avatar. During the interaction observed in the video the prior participants carried out a Relational Ability Task. This task has individuals view the possible verbal pronunciation of a word and try to match it with one of two symbols from an ancient language to that pronunciation. In reality there are no right answers to the task, but participants are led to believe there are.

Participants are informed that they will be carrying out the same task and will be identified through possession of one of the same avatars they observe, the other of which will be given to a partner. Participants are then asked a series of comprehension check questions to ensure they understood the Relational Ability Task. In order to continue they are required to correctly answer 4 out of the 5 comprehension check questions. Failure to do so results in a message informing the participant that they are unable to continue because they have not demonstrated that they adequately understand the task. Following this, they view the video of the previous interaction and are asked to indicate which avatar they would like to possess for the next part of the study if they were given a

1, 6 were dropped from condition 2, and 1 was dropped from condition 3. Equal cell sizes were desired to run accurate ANOVA's.

choice. They then completed a series of ratings to obtain their perspective on how they viewed the previous interactants and their avatars as status valued objects.

The second part of the study had participants carry out 5 practice rounds of the Relational Ability task, followed by adaptations of the two previous Likert scales asking them to rate their expected performance and the expected performance of their partner during the Relational Ability Task. Before the practice rounds individuals were given another set of directions and comprehension checks. Like the first set, passing 4 out of the 5 questions was required to continue in the study.

The practice rounds differed from the rounds observed in the video in two ways. First, a score was not kept. This was to make performance ambiguous, encouraging inference from the knowledge individuals had about each other, which in this case was only the difference in avatars possessed by the individual. Second, the partner that participants were paired with was actually a simulated other which was preprogramed to disagree with them on 4 out of the 5 practice rounds.

After the practice rounds participants filled out adaptations of the first two Likert scales, along with the additional status and ability items that were asked during the first part of the study. These adaptations asked participants to make assessments of performance expectations for themselves and their partners as well as and the status value of the objects that they possessed. Following these ratings participants were asked to provide additional information about themselves. This information included demographics, as well as suspicion checks and additional items to see if the participants had seen the geometric patterns and shapes before. Around 26% reported that they had

seen these avatars outside of the study, with the most common location of the avatars being video games, specifically smart phone games and the computer game Portal. Although this did not seem to have any effect on the interpretation or ranking of the avatars outside of the experimental manipulation.

After demographics were collected, participants were debriefed and thanked for their participation. The mTurk website handled all pay, recruitment, and work rejection procedures, in addition to record keeping and communication between myself and the participants if it was needed.

4.1 VARIABLES

Variables for this study included measures of general performance expectations from a scale created by Zeller and Warnecke (1973), measures of status value from the Status Value Scale (Thye 2000), and single Likert scale questions asking about perceived ability at similar tasks, general ability, and individual status. In addition to these items were single questions on how luck effected their perspectives of performance and how feelings of control effect their perspectives of performance. For the first part of the study these questions were asked to participants about observed individuals. For the second part of the study participants were asked to answer the questions with relation to themselves and their partner.

The Zeller and Warnecke scale was used to rate general expectations for performance and competency. The scale itself is made up of nine Likert scale items that are used to rate: expected performance (e.g., better at or able to perform a task), intelligence, worth, industriousness, superiority, ability, and morality. All of these items

were done on a 1-7 scale. The scales alpha is .93. During analysis a simple factor loading was performed on this scale to see if it contained different components. This was done because the original literature proposed that there are three unique factors that items of this scale load onto (Zeller and Warnecke 1973). Results of the factor analysis show that, although multiple factor loadings can be found, none of the items reliably load onto independent factors. Because of this the items of the Zeller and Warnecke scale are treated as a single scale with no factor divisions in analysis. However, at times during analysis, specific items of interest will be referred to individually.

The status value scale was created by Shane Thye and is used to rate the status value that an object or characteristic possesses (Thye 2000). It is composed of three Likert scale items measuring the value, meaningfulness, and honor of an object. Similar to the general expectations scale, all items on this scale are rated from 1-7. The scales reported alpha was .89. All scales and individual items were completed by the participant and were carried out for all actors involved in an interaction. In other words, for the video observation section of the study participants filled out the scales and items for the observed others, but for the avatar possession and practice interaction part of the study participants filled out the items and scales for themselves and their simulated partner. In addition to these scales and the single item Likert scales, participants answered a series of demographic questions that asked for their age, level of education, approximant income, and subjective Social Economic Status.

Several comprehension checks were used during the study to ensure that participants understood the directions given to them, the meaning of the avatars, and what happened in prior interactions. The comprehension checks were divided into two sets of

5, one set was taken after the first part of the study to make sure that participants understood the meaning of the avatars to the study, the rules of interaction during the first part of the study, and how scoring worked during the task. The second set was taken after participants read directions about the practice rounds to make sure that participants understood that they were interacting with a partner, what the procedure was for the practice rounds, and that a score was not kept for the practice rounds.

Two manipulation checks were also included in the experiment. The first manipulation check was a series of questions asking about the performance of observed actors using the avatars as a form of identification. This check also includes a series of questions on the value of the avatars and the participants preferred choice for an avatar in the next part of the study if they were allowed to choose. Results of this manipulation check show that individuals did interpret performance and value correctly, with over 70% correctly identifying the avatar of the higher and lower preforming actor and viewed the higher preforming actors' avatar more valuable (see table 4.2). The majority of individuals also chose the higher status avatar as the one they would want in the next task, but the variance of responses is greater than what would be expected. However, it seems that one of the reasons may have been that individuals found the eye avatar more attractive in the mTurk population then in the student population used for the avatar norming study.

The second manipulation check followed the final set of scales and asked participants how much of their earnings for the study would they hypothetically be willing to give to possess the avatar of their partner. Previous research on status value and power has found that if an avatar has higher status value then it will have greater

exchange value. In addition to this, individuals are willing to exchange monetary resources for a high status valued object, such as a poker chip. I expect this to be true in this experiment regardless of the lack of actual exchange. Results from comparisons between conditions show that there were no significant differences between what participants were willing to exchange for the simulated others avatar, with a sizable number of individuals choosing not to propose a hypothetical amount regardless of the condition that they were in. This may have been the result of individuals valuing their own avatar more than expected, regardless of its high or low status. This explanation is expanded on in the discussion.

Table 4.2 Manipulation Check Results

	Frequency	Percentage
Correctly chose High	148	77.08
Correctly chose Low	136	70.83
Highest Value	132	68.75
Individual Choice	90	46.88

CHAPTER 5

RESULTS

The sample of mTurk workers that participated in this study are similar to samples reported by previous research using the same platform (Berinksy et al. 2012; Huff and Tingley 2015). The sample itself is 64% male and a majority of participants report their race as white. Most participants report some level of higher education, with 48% of participants holding a college degree, and another 27% having at least some college education. The age of participants ranges from 19 to 70, with a mean of 34 and a median of 32. Frequency tables of age, when compared to the median of age, show that the upper limits seem to be driven by select outliers. Looking solely at frequency of response, most participants were in their late 20s and early to mid 30s. In terms of subjective SES and income, most participants made less than $60,000 a year, and considered themselves in the middle of the subjective SES scale. More details are provided in table 5.1.

Results from this study can be divided into before and after an avatar is possessed by the participant. The analysis of before possession includes a series of t-tests comparing the ratings of the high and low status valued avatars and the general performance expectations and status of the individuals possessing these objects. Results for after the avatar is possessed are mostly composed of a series of One-Way ANOVA's with

Table 5.1 Demographic Summary Statistics

Variables	Count	Percentage
Race		
White	135	70.31%
Black	27	14.06%
Hispanic	9	4.69%
Asian or Pacific Islander	9	4.69%
Native American	9	4.69%
Other	3	1.56%
Sex		
Male	123	64.06%
Female	68	35.42%
Other	1	0.52%
Education		
High School	28	14.66%
Some College	52	27.23%
College Graduate	92	48.17%
Graduate School or Higher	19	9.95%

Bonferroni post hoc tests, and a series of regressions models using participants self-reported demographics as predictors. The One-way ANOVA's test for differences between conditions are followed up by Bonferroni post hoc tests if an ANOVA that had significant results.

Table 5.2 T-test of Status Conferment – General Expectations Scale

	Obs	Mean	Std. Error	Std. Deviation	95% Confidence Interval	
Lo_Expect	**192**	**37.56**	**.699**	**9.69**	**36.18**	**38.94**
Hi_Expect	**192**	**46.49**	**.601**	**8.33**	**45.30**	**47.68**
Difference		**-8.93**	**.922**		**-10.75**	**-7.12**
	Ha: diff < 0		**Ha: diff !=0**		**Ha: diff > 0**	
	Pr (T < t) = 0.000		**Pr (|T| < |t|) = 0.000**		**Pr (T > t) = 1.000**	

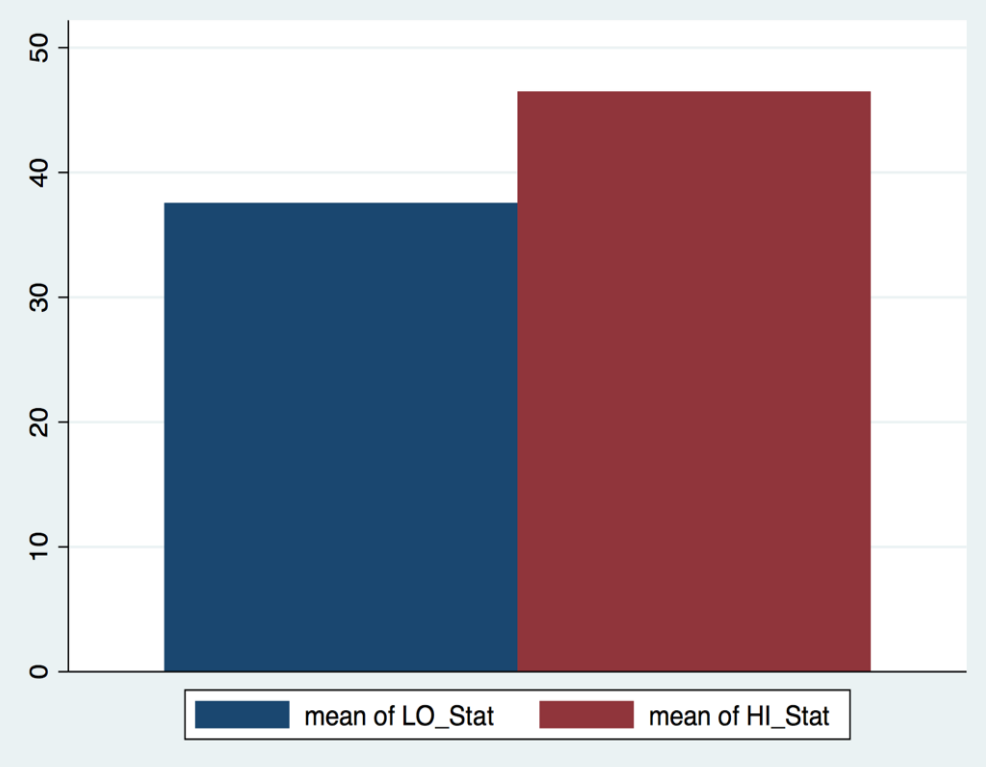

Figure 5.1 Means of General Expectations Scale

Results of the t-tests show that there are significant differences between the means of the general expectations scales for the referential actors ($P < 0.001$, $d = 0.989$). However, there are no differences for the Status Value scale and the individual Likert items of status, ability, and ability at a similar task. Although all of the individual items in the general expectations scale are significant, several are worth taking note of individually. Specifically, scale items measuring how much better and able an individual is generally expected to be compared to their partner (see description in variables section) are of interest. This is because they relate more to the manipulation of specific expectations than other items on the scale, providing insight into an individual's perception of performance and specific expectations for the observed task. Both of these items were significant at $P < 0.001$ with an effect size of $d = -1.00$ for better and $d = .785$

for able. See table 5.2 for a summary table of the t-test and figure 5.1 for a visualization of the differences between avatars.

Table 5.3 One-way ANOVA of General Performance Expectations (Self-Rating of Participant)

Source	SS	df	MS	F	Prob > F
Between Groups	231.72	3	77.24	0.96	0.4115
Within Groups	15085.02	188	80.24		
Total	15316.75	191	80.19		

Table 5.4 Bonferroni Post-Hoc for General Performance Expectations (Self-Rating of Participant)

	Condition 1	Condition 2	Condition 3
Condition 2	-0.271		
	1.000		
Condition 3	0.625	.895	
	0.320	1.00	
Condition 4	2.54	2.81	1.92
	0.997	0.754	1.000

Table 5.5 One-way ANOVA of General Performance Expectations (Participant ratings of Partner)

Source	SS	df	MS	F	Prob > F
Between Groups	228.97	3	76.32	0.92	0.443
Within Groups	15630.23	188	83.14		
Total	15859.20	191	83.032		

Table 5.6 Bonferroni Post-Hoc for General Performance Expectations (Participant ratings of Partner)

	Condition 1	Condition 2	Condition 3
Condition 2	.625		
	1.000		
Condition 3	-2.270	-2.89	
	1.000	0.729	
Condition 4	-0.958	-1.583	1.31
	1.000	1.000	1.000

One-way ANOVA's with Bonferroni post-hoc tests primarily composed the analysis of events after the participants possess one of the avatars. These tests compared partner's self-ratings and ratings of their partner on expected performance, status, and status value. Self-ratings and partner ratings are analyzed independent of each other, with the comparisons focused on differences between conditions. For the general expectations scale, there was no difference in either participants' self-rating and ratings of their

partner's general expectations. In other words, participants did not rate themselves, nor their partners general performance expectations in significantly different ways between conditions (see tables 5.3 – 5.6).

Table 5.7 One-way ANOVAs of the Status Value Scale (Self-Rating of Participant)

Source	SS	df	MS	F	Prob > F
Between Groups	216.43	3	72.14	3.54	0.015
Within Groups	3830.94	188	20.37		
Total	4047.37	191	21.19		

Table 5.8 Bonferroni Post-Hoc for Status Value Scale (Self-Rating of Participant)

	Condition 1	Condition 2	Condition 3
Condition 2	-1.104		
	1.000		
Condition 3	1.79	2.89	
	0.320	0.012	
Condition 4	.792	1.89	-1
	1.000	0.246	1.000

However, the Status Value scale did show statistically significant differences between conditions, specifically when referencing the value of the avatar in possession of the participant. When the participant is in possession of the high status avatar, the one

previously possessed by a high performing actor, they rate it as having higher status value. There are no significant differences found between conditions for the participants rating of their partners avatar. This finding is only true for comparisons between conditions 2 and 3, in which the status values of the avatars are mismatched. Between these conditions, the difference between Status Value scale ratings of the avatar is over a point on the Likert scale, and is highly significant ($P<.01$, $d = 2.42$) [3]. Table 5.7 and 5.8 provide a summary of this comparison. If items from the Status Value Scale are considered individually, they are still found to be significant, with a Bonferroni post-hoc test confirming that this significance is again only between the status mismatched conditions. The results of this test are not reported but are available by request.

Table 5.9 One-way ANOVA results for Status (Participant ratings of Partner)

Source	SS	df	MS	F	Prob > F
Between Groups	18.27	3	6.09	2.98	0.0325
Within Groups	383.708	188	2.04		
Total	401.979	191	2.105		

Similar to the Status Value scale, the Likert scale items for rating status and ability at a similar task were significantly different when compared between conditions. A Bonferroni post-hoc test indicates significance differences are again found between the two status mismatched conditions, condition 2 and 3. However, the significance indicated by the post-hoc tests is only observed for the ratings of the partner. Participants rated only

[3] All significance levels and P-values are calculated using the unstandardized values.

their partner as higher status when in possession of the higher status avatar ($P < 0.10$), and as having greater ability at similar tasks ($P < 0.01$). For the participant themselves, there was no effect on how they self-rating in terms of status and ability at a similar task. Participants viewed their partner as having status and ability at a similar task when in possession of the high status avatar; but the same is not true when the participant is in possession of the high status avatar (see tables 5.9-5.12). Other items, such as participant and partner ratings of ability, were not significantly difference between conditions. Addition measures for perceived luck and control during the task were also insignificant. However, the item measuring perceived control had notable differences between the means of conditions 2 and 3. This difference was 0.6[4], but the means for these conditions contained a large amount of variance.

Table 5.10 Bonferroni Post-Hoc for Status Likert Item

	Condition 1	**Condition 2**	**Condition 3**
Condition 2	**.6041**		
	.238		
Condition 3	**-.125**	**-.729**	
	1.000	**0.080**	
Condition 4	**.479**	**-.125**	**.604**
	0.612	**1.000**	**.238**

[4] Noticing this difference led me to think that the effect could be present, but I did not have enough power to find it. Because of this I did a post-hoc power analysis to find how many participants would be needed to obtain significance if the effect is actually present. The results of this analysis showed that I would need to run an additional 450 participants in order to gain significance if the effect is actually present.

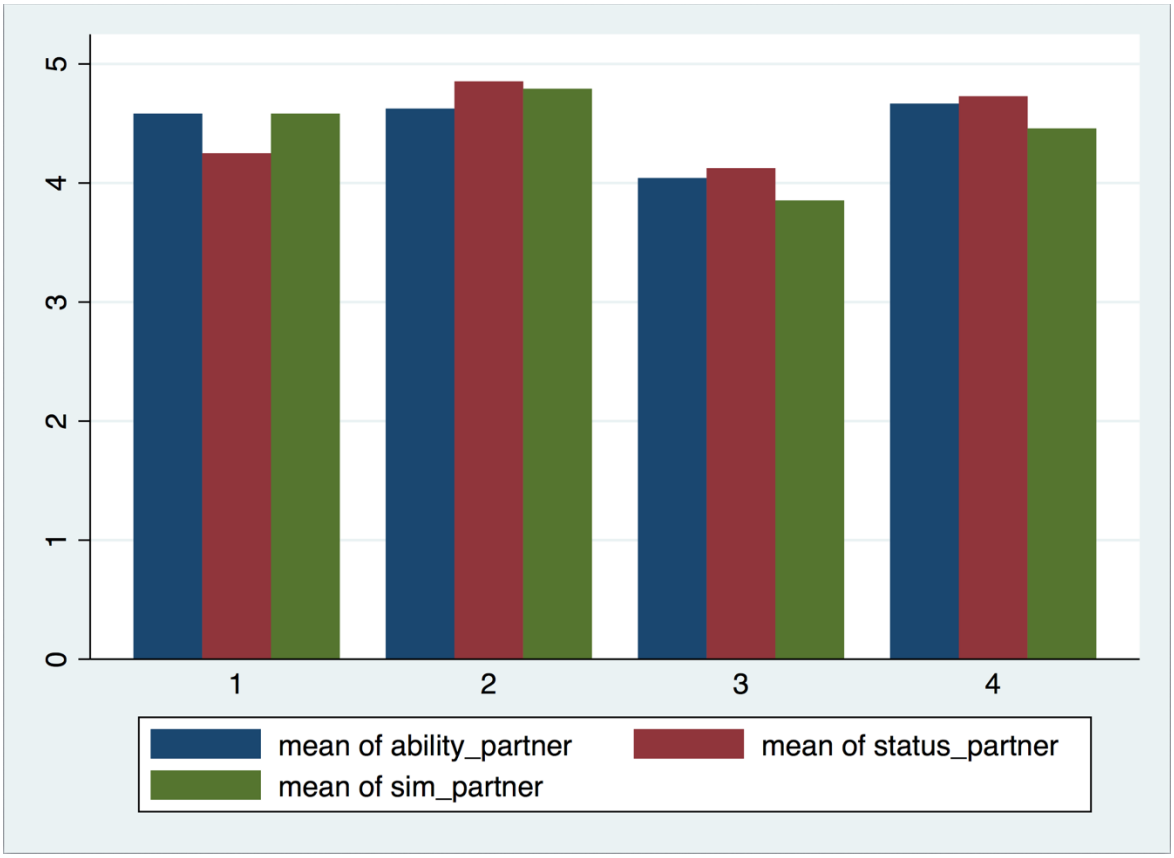

Figure 5.2 Single Likert Items by Condition

Table 5.11 One-way ANOVA results for Similar Ability (Participant ratings of Partner)

Source	SS	df	MS	F	Prob > F
Between Groups	23.35	3	7.78	4.16	0.007
Within Groups	351.48	188	1.87		
Total	374.82	191	1.96		

Table 5.12 Bonferroni Post-Hoc for Similar Ability Likert Item

	Condition 1	Condition 2	Condition 3
Condition 2	**.208**		
	1.000		
Condition 3	**-.729**	**-.9374**	
	.058	**0.006**	
Condition 4	**-.125**	**-.3333**	**.604**
	1.000	**1.000**	**0.190**

Although not part of the theory, exploratory analysis using a series of regressions was run on the demographics data provided by participants to test of effects of participant background and susceptibility to status processes involved in possession of an object. Regressions on the general expectations scales, Status Value scale, and individual Likert items used the demographics of sex, age, income, and education as independent variables. Results from the regressions for participant and partner status value and general expectations show education as a significant predictor, increasing general expectations or Status Value of an object when it is present. However, no other demographic variables are significant in the regression models (see table 5.13).

Running a reduced model with only education as an independent variable yields significant coefficients of .89 for self-reported status value, 1.17 for partner's status value, and 2.38 for partners general expectations. This generally confirms the observation above: that as education increases, individuals see avatars as more valuable (see table 5.14). However, it is not possible to rule out alternative explanations for this effect, such

as individuals with a higher education reading and following study directions more closely than other participants.

For participants' ratings of themselves, status is the only item to have any significant predictors. A single predictor, education, is reported as significant, with a coefficient of .25. For the participants ratings of the partner, status, ability, and ability at a similar task have significant predictors. Status and ability share the significant predictor of education, with a coefficient of .365 and .413. Ability at a similar task has two significant predictors, education and income. In this model the effect of education is significant and positive, with a coefficient of 0.424, and the effect of income is significant and negative, with a coefficient of -0.179. Reduced models were run for all of these variables. The results show these variables, with the exception of self-ratings of status, stay significant. However, there is a notable drop in significance of the coefficients and the r-squared for most of the reduced models. This drop is most notable for ratings of Status for self and partner (see table 5.13 and 5.14). Although not directly relevant to the theory, this exploratory analysis provides insight into future research, particularly for understanding how the background of individuals interacts with the process of expectation allocation when high status objects are involved.

Table 5.13 Regression tables for scales and Single Likert Items (full models)

	General Expectations – Self	General Expectations – Partner	Status Value – Self	Status Value – Partner	Status - Self	Status – Partner	Ability – Self	Ability – Partner	Similar Ability – Self	Similar Ability – Partner
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Social – Economic Scale	.411 (.33)	-.151 (.330)	-.252 (.169)	-.137 (.171)	-.04 (.059)	-.020 (.053)	.045 (.053)	-.066 (.049)	.104 (.055)	-.046 (.050)
Sex	-.789 (1.33)	-.613 (1.32)	.104 (.678)	-.875 (.687)	-.177 (.234)	-.086 (.212)	-.129 (.214)	-.096 (.197)	-.043 (.221)	-.049 (.201)
Age	-.022 (.067)	.016 (.067)	-.005 (.034)	.014 (.035)	-.017 (.012)	-.009 (.011)	-.003 (.011)	.001 (.010)	.0005 (.011)	.011 (.010)
Education	.95 (.781)	2.72 (.778)***	1.016 (.400)*	1.25 (.404) **	.25 (.14)*	.365 (.125)**	.019 (.126)	.413 (.116) ***	.013 (.130)	.432 (.118) ***
Income	.074(.419)	-.484 (.419)	-.009 (.214)	-.013 (.217)	.034 (.075)	-.108 (.067)	-.029 (.068)	-.104 (.062)	-.051 (.07)	-.167 (.066) **
Intercept	39.20	32.98	10.12	9.44	4.60	4.07	4.66	3.74	4.32	3.35
R—squared	.026	.064	.042	.059	.033	.056	.007	.080	.020	.098

Table 5.14 Regression tables for scales and Single Likert Items (reduced models)

	General Expectations – Partner	Status Value – Self	Status Value – Partner	Status - Self	Status – Partner	Ability – Partner	Similar Ability – Partner
	Model 2	Model 3	Model 4	Model 5	Model 6	Model 8	Model 10
Education	2.38 (.74) **	.891 (.380) *	1.17 (.385) **	.231 (.133)	.285 (.120)*	.321 (.112) **	.424 (.118) ***
Income	-	-	-	-	-	-	-.179 (.058) **
Intercept	31.64	9.37	8.37	3.77	3.47	3.33	3.32
R—squared	.052	.020	.047	.016	.029	.04	.086

CHAPTER 6

DISCUSSION

In general, I had expected status value to transfer from an individual to an object, and then temporarily back to the individual via possession. From this I expected the temporarily held status to also increase the general expectations that the individual holds for themselves or another in possession of the high status valued object. Instead, participants attribute greater performance expectations to the initial individual in possession of the object, but they do not seem to immediately gain status value as indicated from the status value scale. However, when considering the manipulation checks, participants do correctly indicate the status of the high value object and typically prefer it to the low value object. Looking past this, when the avatars are possessed by participants and their simulated partner we do find large differences in status value, with the individual valuing the high status valued object more when they are in possession of it. Taking both of these observations together I claim support for the first hypothesis: status value is able to transfer from the status of the individuals in the initial interaction to the object. However, I would note caution with my support for this hypothesis because the increase or decrease in status value does not seem to be successfully conferred to the object until it is possessed by others in a new interaction.

The second hypothesis, that possession of a high status valued object will increase an individual's status during interactions is found to be partially supported. It seems that

the reference of who possesses the object in question matters more than previously expected. Findings suggest that status only increases when another is in possession of the high status valued object. This is the opposite for Status Value, which does not see an increase when others are in possession the high status valued object. However, it sees a large increase when the individual providing evaluations of the situation is in possession of the high status valued object. Again, this only has a significant effect when objects of two different status values are involved. This may hint at a cognitive effect on how performance is allocated, where when in possession of a high status valued object the performance is attributed to the object instead of the individuals.

The third hypothesis, that possession of a high status valued object will increase an individual's performance expectations, is also partly supported. In general, the trend for this hypothesis is the same as hypothesis two, when another possesses the status valued object they get a boost in their performance expectations. However, this only holds true for specific expectations measured by the ability at a similar task item, not for expectations measured by the general expectations scale.

The most puzzling finding from this study is that individuals see the object as possessing greater status value when they are in possession of it, but do not see themselves as possessing greater status or ability when in possession. It could be that the object is not transferring expectations from the initial interaction to the individual and thus doesn't confer status to them during possession. However, when the simulated partner is in possession of the High Status Valued object, they are assumed to have higher status and perform better at a similar task, but the status value of their object is not seen as greater in comparison.

One explanation for this is that there is a difference in the process of allocation of value to the object, and status and performance expectations to the individual. When the individual possesses the high status value object they assume that it is the object instead of their innate ability that is causing their performance. This results in them lowering their expectations for themselves when not considering the object. For example, if an individual expects to perform better with a specific brand of musical instrument, regardless of the actual quality of the instrument, they may attribute positive performance expectations to the object instead of themselves.

There is support for these differences in value resulting from possession from the literature on the endowment effect, which states that individuals value an object more than those without it simply because they are in possession of it (Kahnemen et al. 1991; Morewedge and Giblin 2015). Experiments in economics literature look closer at this concept, finding that once an object is given to an individual to possess, they attribute an exchange value to it, often which is above the market price of the object (Kahnemen et al. 1991). This prevents individuals from parting with their endowed object because they value it more than what others are willing to exchange for it. However, when asked to rate the attractiveness of an object in their possession it's not see as more attractive than its counterpart (Kahnemen et al. 1991). In addition to this interpretation of the Endowment Effect, others have proposed that that the effect is actually the result of evolutional advantages in situation interpretations (Huck et al. 2005), strategic misinterpretation as a bargaining strategy (Kurt and Inman 2013), and bias in processing exchange information (Ashby et al. 2012).

The endowment effect explains in part why Status Value is not affected when another is in possession of the status valued object. Because the experiment was designed so that both the participant and their simulated partner possessed an object, a kind of floor effect may have been created for the objects value. This could prevent the effects of negative status value and expectations associated with the object from being perceived by the individual. Future studies in this line of research should try to account for this effect by including conditions in which no object is provided to one of the interactants, either simulated or otherwise, with the single object being either high or low in status value. Although this would change the scope of the theory this study tests, as the study proposes to keep objects present for all individuals during their interactions as to keep things similar. However, the change in the scope would allow for a measurement of how much the endowment effect influences individuals valuation of an object.

This would also provide the study with more mundane realism because high status objects are not always met with a viable lower status alterative. For example, an individual possessing a Rolex watch is unlikely to have an interaction with another who possess a lower value Rolex, or in many cases, a watch in general. Instead, the Rolex is serving as a status valued object with no alternative. Strengthening the claim to a Rolex Watch as a status valued object, those with a Rolex may still refer to their smart phone as a timekeeper, making the Rolex a part of their outfit instead of an object with utility.

It is also possible that there is a mismatch between what I measured using the general expectations scale and the manipulation. During the observation of previous individuals interacting with the avatars a very specific set of characteristics was manipulated, ability at a Relational Ability task. However, items that make up the general

expectations scale created by Zeller and Warnecke do not include measurements of specific expectations, such as ability at a specific variety of task (i.e., writing, pattern recognition, woodworking, etc.). Because of this, the scale could be missing the expectations being manipulated in the interaction simply by not measuring them.

This claim has some support from results of the items used to measure ability, ability at a similar task, and status. Results from between groups comparisons show that participants indicated that when their simulated partner possessed the status valued object they were seen as having greater ability at a similar task and higher status in comparison to the participant. Participants did not get the same boost when it in possession of a high status object. However, they were not asked directly about expectations related to specific ability in a scale or series of questions. Instead, we are inferring their specific expectations from the single Likert scale item. Other aspects of specific performance expectations, such as regular or future performance, and the utility of the item during performance, were not accounted for.

Another explanation for the lack of general expectations transferring is that there is not enough status valued added to the object from the one interaction being salient to the participant. Because the avatar did not have a long history of possession, it is possible that status value had not been adequately conferred to the object because it was not clear that the avatar is actually tied to performance. For example, a Stradivarius Violin was not inherently given high Status Value from its creation, but it has high Status Value because of its association with the Stradivarius family and with other musicians that possessed a Stradivarius and performed well. In addition to this, in previous work on Status Value

and power in exchange relationships there were multiple rounds of exchange that solidified Status Value of the object via attachment to the individual.

Future studies are needed to understand this effect and the incrementation that a single interaction causes in terms of Status Value versus when multiple interactions are known and salient to the individual. For example, future studies could use the same situation, and instead of providing the participant with the object after a single interaction, the participant could view a diagram of individual interaction in a specific order. This diagram could present the interaction sequence and the performance outcomes of the interaction, providing participants with a clear understanding of how far away they are from the initial interaction, and an understanding of the performance history of those in possession of the object. This could also be done as a simple vignette experiment providing the same information to the participant as written text, although the manipulation would not be as strong as a visual diagram.

It may also be possible that status value can increase and decrease over time depending on the history of possession. For example, if a brand of cookware is given high status value via its association with important culinary figures but is then shown to be common along a line of very poorly preforming fry cooks it is likely that this will lower its value in the eyes of individuals that are aware of its common possession among fry cooks. The change in status value via association with high or low status others may be a summarizing effect, a sequential effect, or have a curvilinear effect in which once a certain amount of status value is reached it is impossible to lose value regardless of the individual associated with it. Although there is not much existing research on how this mechanism may work, it does fit with existing research on the transfer of performance

expectations between situations in experiments (Markovsky et al. 1984) and classrooms (Cohen and Lotan 1995).

Lastly, the relevance of the object to the task could matter more than what was previously expected. For example, if the task which an individual performs is an Algebra task and the high status avatar is an Abacus, it would be more salient because of the task and more important to the individual when they or another possess it. In Thye's studies on status value and exchange value poker chips are used, which already have an exchange value salience to them either from gambling or from use in a number of board games, and the effects of these studies are stronger and clearer than I find here.

However, there are similar studies that do not use task meaningful objects and are still able to gain significant results. Harkness (2017) studied status spread via association with reward states as the object of status value, which is more abstract then the possession of an avatar. This study also utilized task ratings of specific ability for the partner that were affected by reward level assignment, which provides support for even more abstract objects. But it is possible that using the avatar as the status valued object, because of its abstractness and lack of connection to the task, resulted in a lesser effect on all measures then what would have been observed if an object had clearer relevance.

CHAPTER 7

CONCLUSION

At the turn of the 20th century, Veblen proposed that individuals will imitate those of higher social classes in order to raise their status (Veblen 1899). In a separate line of theory, Frank (1985) proposed that individuals are willing to exchange time and resources for association with high status others and groups. Tying these together, Thye (2000) proposed and experimentally confirmed the Status Value Theory of Power, which claimed that individuals of higher status think of their resources as more valuable and are able to exchange their resources for more of a low status other's resource. However, in all of these lines of inquiry the question of whether the possession of a status valued object actually increases status was not directly answered. This study makes important first steps in answering this question by expanding existing theory and discussing the nature of status value outside the standard context of Status Characteristics.

This study is only able to partly support the proposed extension of the Theory of Status Value, finding that status value and expectations only clearly transfer to the other, not the self. The results suggest that when individuals are in possession of an object of high status value they attribute positive performance to the object instead of themselves, increasing its status value. However, when another is in possession of a Status Valued Object both status and expectations are attributed to the other. Additional status value is not attributed to the object in their possession. This paradoxical outcome needs additional

research to be clearly understood. However, several explanations have been put forward to explain these findings. The first proposes that there is an unaccounted for process of expectation formation in which individuals perform a kind of cognitive dissonance in order to explain why they do not possess a status valued object. A second explanation proposes that the endowment effect resulted in a floor value for any object that an individual possesses. Finally, a third explanation proposes that more than a single interaction is needed before status value can clearly be tied to an object. After a series of interactions, a threshold effect may take hold, allowing the item to contain status value high enough to be transferred to another individual clearly. In addition, a high enough status valuation may also adequately confer status to another via a similar process.

This study is not without its problems and oversights, specifically in measurement. During the study specific performance expectations were manipulated. However, the scale used to gain information about status expectations was a general expectations scale. This mismatch in manipulation and measurement is likely to have resulted in lost information on how individuals actually felt and develop evaluations. Taking this into account, the measure that did get at specific expectations, performance at a similar task, was significant and fits into explanations 1 and 2 proposed in this discussion.

Although there are several scales for measuring general expectations, including Zeller and Wernecke's general expectations scale (Zeller and Wernecke 1973) and Ridgeway's Status and Conscientiousness scale (Ridgeway and Correll 2006), there is not an existing scale for measuring specific expectations. Such a scale should be developed and incorporated into future studies on status value and object possession in order to

adequately measure expectations and further our understanding of how status and expectations spread to individuals in possession of Status Valued Objects.

Overall, this study does provide some answers to the question of "do status valued objects spread status." However, the answers provided are less clear than what was hoped, leaving room for future research. Specifically, additional research is needed to address which explanation is more likely to explain this study's observations, and new expectations scales are needed in order to clearly get at specific instead of general expectations.

REFERENCES

Ashby, Nathaniel J.S., Stephan Dickert, and Andreas Glöckner. 2012. "Focusing on what you own: Biased information uptake due to ownership." *Judgement and Decision Making* 7(3):254-267

Ball, Brain, and M. E. J. Newman. 2013. "Friendship Networks and Social Status." *Network Science* 1:16-30

Belluck, Pam. 2014. "A Strad? Violinists Can't Tell." *New York Times*, April 7, 2014

Berger, Joseph, Bernard P. Cohen, and Morris Zelditch, Jr. 1972. "Status Characteristics and Social Interaction." *American Sociological Review* 37(3):241-255.

Berger, Joseph, Morris Zelditch Jr., Bo Anderson, and Bernard Cohen. 1972. "Structural Aspects of Distributive Justice: A Status-Value Formulation." Pp. 119-146 in *Sociological Theories in Progress Vol. 2*, edited by Joseph Berger, Morris Zelditch Jr., and Bo Anderson

Berger, Joseph, Thomas L. Conner and M. Hamit Fisek. 1974. *Expectation States Theory: A Theoretical Research Program*. Winthrop.

Berger, Joseph, M. Hamit Fisek, Robert Z. Norman, and Morris Zelditch, Jr. 1977. *Status Characteristics and Social Interaction*. New York: Elsevier

Berger, Joseph, M. Hamit Fisek, Robert Z. Norman, and David Wagner. 1985. "Formation of Reward Expectations in Status Situations." Pp. 215-261 in *Status, Rewards, and Influence*, edited by Joseph Berger and Morris Zeldtich Jr.

Berger, Joseph, Morris Zelditch, Jr., and David G. Wagner. 1985. "Theoretical and Metatheoretical Themes in Expectation States Theory." Pp. 148-168 in *Perspectives on Sociological Theory Vol. 2, Microsociological Theory*, edited by H. Helle and S. Eisenstadt. Sage.

Berger, Joseph, Norman, Robert Z., Balkwell, James W., and Smith Roy F. 1992. "Status Inconsistency in Task Situations: A Test of Four Status Processing Principles." American Sociological Review 57(6): 843-855

Berger, Joseph, M. Hamit Fisek, Robert Z. Norman and David G. Wagner. 1998. "Formation of reward expectations in status situations." Pp. 121-154 in *Status, Power, and Legitimacy*, edited by J. Berger and M. Zelditch. Transaction Publishers

Berger, Joseph and M. Hamit Fisek. 2006. "Diffuse Status Characteristics and the Spread of Status Value: A Formal Theory." American Journal of Sociology 111(4): 1038-1079

Berger, Joseph, David G. Wagner and Murray Webster Jr. 2014. “Expectation States Theory: Growth, Opportunities and Challenges.” Pp. 19-55 in *Advances in Group Processes Vol. 31*, edited by S. Thye and E. Lawler. Emerald Publishing

Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. “Evaluating Online Labor Markets for Experimental Research: Amazon.com’s Mechanical Turk.” Political Analysis 20(3):351–68

Cohen, Elizabeth G., and Rachel A. Lotan. 1995. “Producing Status Equal Interaction in Heterogeneous Classrooms.” *American Education Research Journal* 32(1): 99-120

Cook, Karen. 1975. “Expectations, Evaluations, and Equality.” *American Sociological Review* 40(3): 372-388

Frank, Robert H. 1985. *Human Behavior and the Quest for Status*. New York: Oxford University Press

Fehr, Ernst and Simon Gächter. 2002. “Altruistic Punishment in Humans.” *Nature* 415: 137-140

Gintis, Herbert, Eric Alden Smith, and Samuel Bowles. 2001. Costly Signaling and Cooperation.” *Journal of Theoretical Biology*. 213(1):103-119

Harkness, Sarah K. 2017. “Spread of Status Value: Rewards and the creation of Status Characteristics.” *Social Science Research* 61: 98-111

Huff, Connor, and Dustin Tingley. 2015. “Who are these people?” Evaluating he demographic characteristics and political preferences of MTurk survey respondents.” *Research and Politics*: 1-12

Kahnneman, David, Jack L. Knetsch, and Richard H. Thaler. 1991. “Anomalies: The Endowment Effect, Loss Aversion, and Status Que Bias.” *Journal of Economic Perspectives* 5(1): 193-206

Kalkhoff, Will. 2005. “Collective validation in multi-actor task groups: The effects of status differentiation.” *Social Psychology Quarterly 68*(1): 57-74.

Kalkhoff, Will and Shane Thye. 2006. “Expectation States Theory and Research: New Observations from Meta-Analysis.” *Sociological Methods & Research* 35(2): 219-249

Kurt, Didem and J. Jeffery Inman. 2013. “Mispredicting Others’ Valuations: Self-Other Difference in the Context of Endowment.” *Journal of Consumer Research* 40(1): 78-89

Lovaglia, Michael J., Jeffrey W. Lucas, Jeffrey A. Houser, Shane R. Thye, and Barry Markovsky. 1998. “Status Processes and Mental Ability Test Scores.” American Journal of Sociology 104(1): 195-228

Markovsky, Barry, Le Roy F. Smith, and Joseph Berger. 1984. “Do Status Interventions Persist?” American Sociological Review 49(3): 373-382

McPherson, Miller, Lynn Smith-Lovin, and James M. Cook. 2001. “Birds of a Feather: Homophily in Social Networks.” *Annual Review of Sociology* 27: 415-44

Ridgeway, Cecilia and Joseph Berger. 1986. “Expectations, Legitimation, and Dominance Behavior in Task Group.” *American Sociological Review* 51(5): 603-617

Ridgeway, Cecilia. 1988. “From Expectation States to Macro Processes.” Pp. 351-365 in *Status Generalization*, edited by M. Webster and M. Foschi. Stanford University Press

Ridgeway, Cecilia. 1991. “The Social Construction of Status Value: Gender and other Nominal Characteristics.” *Social Forces* 70(2): 367-386

Ridgeway, Cecilia L., and J. W. Balkwell. 1997. “Group Processes and the Diffusion of Status Value Beliefs.” *Social Psychology Quarterly* 60(1):14–31

Ridgeway, Cecilia L. 2000. “The Formation of Status Beliefs: Improving Status Construction Theory.” Pp. 77-102 in *Advances in Group Processes Vol. 17*, edited by E. Lawler, M. Macy, S. Thye, and H. Walker. Emerald Publishing

Ridgeway, Cecilia L. and Kristan G. Erickson. 2000. “Creation and Spread of Status Beliefs.” *American Journal of Sociology* 106(4): 579-615

Ridgeway, Cecilia L. and Shelley J. Correll. 2006. “Consensus and the Creation of Status Beliefs.” *Social Forces* 85(1): 431-453

Searcy, Willaims and Stephan Nowicki. 2005. *The Evolution of Animal Communication: Reliability and Deception in Signaling Systems.* Princeton University Press

Sherif, Muzafer, O. J. Harvey, B. Jack White, William R. Hood and Carolyn W. Sherif. The Robbers Cave Experiment: Intergroup Conflict and Cooperation. Wesleyan University Press, [1961] 1988.

Silver, Ira. 1996. “Role Transitions, Objects, and Identity.” *Symbolic Interaction*. 19(1):1-20

Spence, Michael. 1973. “Job Market Signaling.” *The Quarterly Journal of Economics*. 87(3): 355-374

Thye, Shane R. 2000. “A Status Value Theory of Power in Exchange Relations.” *American Sociological Review* 65(3): 407-432

Thye, Shane R., David Willer, and Barry Markovsky. 2006. “From Status to Power: New Models at the Intersection of Two Theories.” Social Forces 84(3):1471-1495

Thye, Shane R. and Ashley Harrell. 2016. “The Status Value Theory of Power and Mechanisms of Micro Stratification: Theory and new experimental evidence.” *Social Science Research* 1-13

Veblen, Thorstein. 1899. *The Theory of the Leisure Class*. Macmillan

Walker, Lisa S., Murry Webster Jr., and Alison J. Bianchi. 2011. “Testing the Spread of Status Value Theory.” *Social Science Research*, 40(6): 1652-1663

Weber, Max. [1918] 1968. *Economy and Society*. Berkley: University of California Press

Webster, Murray and Stuart Hysom. 1998. “Creating Status Characteristics.” *American Sociological Review* 63(3): 351-378

Webster, Murray and Lisa Slattery Walker. 2017. “How Status Spreads.” Pp. 1-19 in *Advances in Group Processes Vol. 31*, edited by S. Thye and E. Lawler. Emerald Publishing

Wagner, David G. and Joseph Berger. 2002. “Expectation States Theory: An Evolving Research Program.” Pp. 41-78 in *New Directions in Contemporary Sociological Theory* edited by M. Zelditch, Jr., and J. Berger. Rowman & Littlefield.

Zelditch, Morris and Anthony Floyd. 1998. “Consensus, Dissensus, and Justification.” Pp. 339-368 in *Status, Power, and Legitimacy*, edited by J. Berger and M. Zelditch. Transaction Publishers

Zelditch, Morris and Henry Walker. 2000. “The Normative Regulation of Power.” Pp. 155-178 in *Advances in Group Processes Vol. 17*, edited by S. Thye and E. Lawler. Emerald Publishing

Zeller, Richard A. and Richard B. Warnecke. 1973. “The Utility of Intervening Constructs in Experiments.” *Sociological Methods & Research* 2(1):85-110

APPENDIX A: FORMAL THEORY MODULE

Terms and Notation Key

Status (s_x): Perceived prestige or honor

Value: The importance socially assigned to an object

Object (R_x): an item that can be possessed

Status Value (v_x): type of importance, prestige, or honor attached to an individual characteristic or exchangeable resource

Actor (P, O, J, Q): an individual who participates in an interaction

Performance Expectations (e_x): an actors expected ability at a task

Scope Conditions

This theory extension will apply under conditions in which (1) at least two noticeably different objects are present, (2) actors are differentiated only by the status values of the objects they possess, (3) there is a clear and salient difference in ability of actors during the first interaction.

Propositions

The propositions in this theory expansion are divided between two modules. The first module explains the interactions of two sets of individuals and their interaction with a nominally valued object. The first set of individuals, P & O, are actors in in possession of the nominally valued objects. The second set of individuals, J & Q, are observing this

interaction. During the second module J and Q are given possession of the status valued objects.

Module 1

Proposition 1: From the perspectives of J and Q, if the performance expectations of P are greater than the performance expectations of O, then the status of P will be greater than the status of O.

Actors observing the interaction and noticing the difference in performance on the observed task adopt the belief that the status P is greater than the status of O. This is derived from assumption 5 of SCT (Berger et all. 1977).

From the perspectives of J and Q $if\ e_p > e_o, then\ s_p > s_o$

Proposition 2: If J and Q observe an interaction between P and O where the performance expectations for P are greater than performance expectations for O, then the value placed on objects in P's possession will be greater than the value placed on objects in O's possession.

This is derived from assumption 1 of SCT (Berger et al. 1977), the status transfer process described in Status Value Theory (Berger and Fisek 2006, 2013), and the observation process that is possible with *doubly dissimilar* encounters (Ridgeway 1991).

$$If\ J\ and\ Q\ observe\ s_p > s_o, then\ v_{JQ}(R_p) > v_{JQ}(R_o)$$

Module 2

Proposition 3: If J possesses object N_P, and Q possesses object N_O, then J and Q will assume that these objects indicate status and infer status from these objects. This is derived from proposition 2 of the proposed theory and the reverse process of Reward Expectations Theory (Berger et al. 1985_1).

This proposition requires that objects possessed by J and Q are the same objects that were in the interactions taking place during proposition 1 and 2. This requirement bridges the two modules via a shared reference for status.

$$If\ J\ possesses\ R_P\ and\ Q\ possesses\ R_O, then\ J\ and\ Q\ assume\ s_J > s_Q$$

Proposition 4: If the status value of object N_P is greater than the status value of object N_O, and there are no contrary sources of information, then the status value of the object possessed by actor P and actor O will be used to form performance expectations. This is derived from proposition 3 of the proposed theory and assumptions 2 and 5 of SCT (Berger et al. 1977).

$$If\ s_J > s_Q, then\ e_J > e_Q$$

Derivations

Derivation 1: If the status value of object N_p is greater than the status value of N_o, then J and Q will see P as having greater status then O. This follows from propositions 1 and 2 from module 1 and assumptions 2 and 5 from SCT (Berger et al. 1977).

$$If\ v_{JQ}(R_p) > v_{JQ}(R_o), then\ J\ and\ Q\ assume\ s_P > s_O$$

Derivation 2: If the performance expectations of P over O is greater than 0, then the performance expectations of J over Q is also greater than 0. This follows from assumptions 1 and 4, showing that the performance expectations based off the initial interaction carry over to future interaction with new actors possessing the same status valued object.

$$If\ e_{PO} > 0, then\ e_{JQ} > 0$$

APPENDIX B: GRAPH THEORETIC MODEL

The figures below illustrate the theory using the graph theoretic model[5]. I have organized the diagrams and explanations into the initial interaction that status value is created (figure 3) and the interactions by observers of the initial interaction (figure 4).

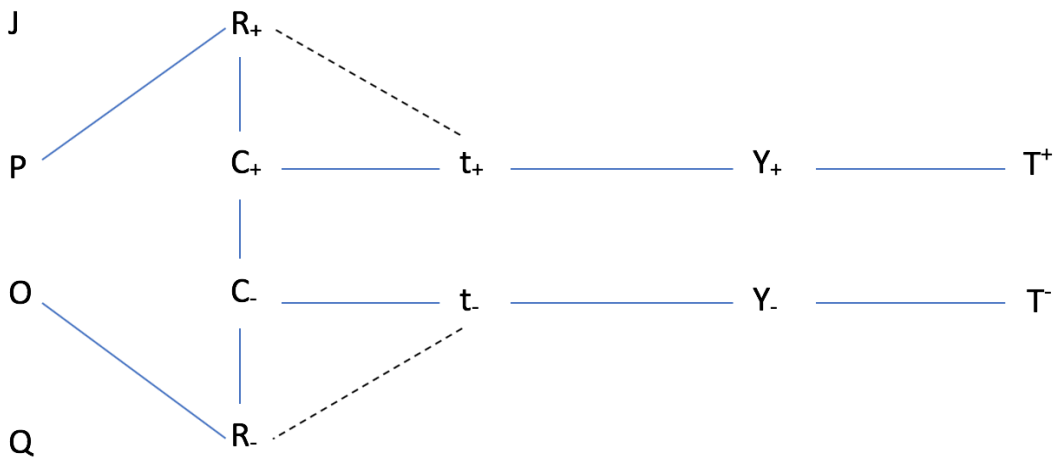

Figure B.1 – Initial Interaction

In the initial interaction 4 actors are present (J,P,O,Q). In figure 3 these actors occupy positions of interactors (P,O) and observers (J,Q). The interactants are tied to different nominal objects ($R_{+,-}$) through a possession bond. The objects connect to task

[5] The graph theoretic model comes from the book Status Characteristics and Social Interaction (Berger et al. 1977) and articles on the Status Value Theory of Power (Thye 2000; Thye and Harrell 2016). I have added the observing actors into a graph model based off these two sources. The second model for possession of objects by actors who were initially observing the interaction was also based off these sources, but more liberties were taking in adapting the model to the theory in this thesis.

specific status characteristic (C), which is expected to be instrumental to the task. In the case of the initial condition, this is the observed performance between actor's P and O.

The specific status characteristic (C) is connected to the task outcome (T) via the generalized expectation state (t) and the abstract task ability (Y). In other words, the observed ability or a specific characteristic is assumed relevant to a task. It is used to reference generalized expectations of those interacting and indicate if they would have abilities instrumental to the task. This results in paths of length 5 and 6.

Over the course of repetitive interaction, the observed performance of P and O would cause actors only observing the interaction to infer a connection between the individual's ability and their status in the dyad. Status is then conferred onto the object in the interactants possession, giving it status value. This inferred connection is shown in figure 3 via the dashed lines. The described process is expected to show similarities to Thye and colleagues work on Status Value Theory of Power (Thye 2000, Thye and Harrell 2016).

After the initial interaction creates salient differences in the valuation of objects possessed by P and O, they drop out of the interaction and the objects are assigned to the observing actors J and Q, creating a possession bond. This changes the graph model by removing the specific status characteristic that was present and the dimensionality bond that connected the two actors. The dimensionality bond is instead shifted down to the generalized expectations state (t), meaning that differences between the two actors are based on the generalized expectations they have instead of a specific or diffused characteristic. Because there is no characteristic present except for the objects bestowed to actors, the status value of these objects will be used to create performance

expectations. This adjusted graph model can be seen in figure 4. This results in paths of length 4 and 5. The tie between the objects and the characteristics of the actors is shown with a dashed line.

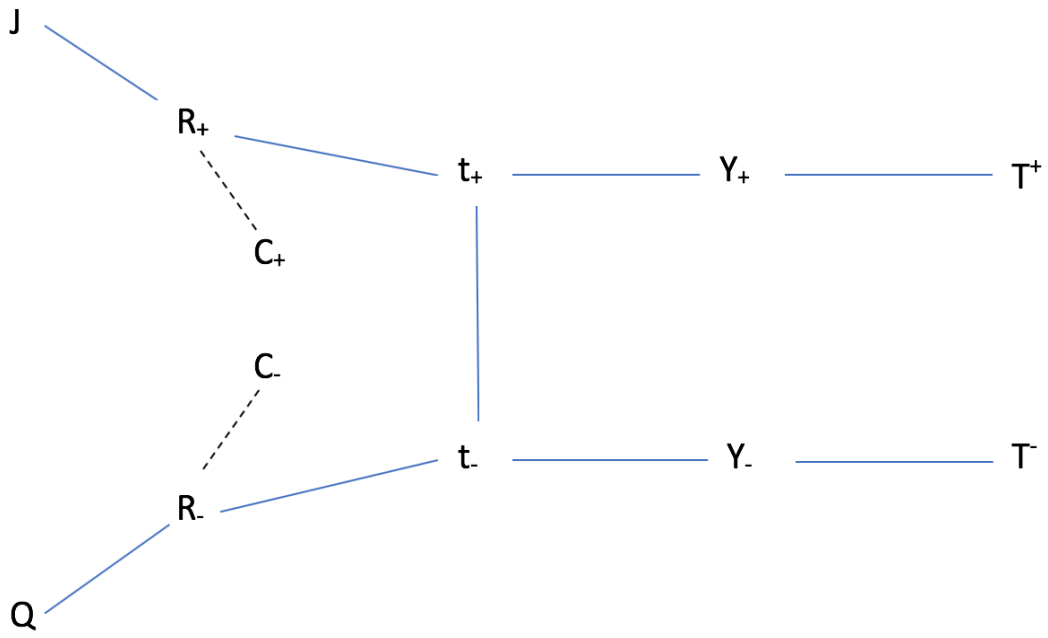

Figure B.2 – Observers Interaction

APPENDIX C: COUNTERBALANCING AVATARS

Counterbalancing of the avatars was done by random assignment in Qualtrics. Participants had an equal chance of being assigned version 1 or version 2 of the video. The versions were the same in scoring by the referential actors at the meaning insight task and in the text and manipulations displayed. The only difference was that version 1 had the sun avatar as the high status avatar, and version 2 had the aperture avatar as the high status avatar, an effect which was created by flipping the avatars in the video. In other words, the visual effects that highlighted scoring and the scores remained constant, only the avatars were moved between versions to create the counterbalance effect.

There is no difference found when using t-tests to compare the means of the general expectations scale between video version. This illustrates that counterbalancing did not have an effect on the general expectations participants had for the individual in possession of the high and low status avatars. However, there is a significant effect when comparing means of the Status Value Scale, as shown in table C.1 and C.2. It seems that in the second version of the video participants rated both the high and low status avatar higher during interaction. When comparing the mean of the low value and high value avatar within conditions there is no effect (see tables C.3 and C.4). This leads to the conclusion that, although there is an effect between videos on how highly avatars were rated, there is not video specific effects that would have influenced the results.

Table C.1 Video Version Comparison, between videos – Low Status Avatar

	Obs	Mean	Std. Error	Std. Deviation	95% Confidence Interval	
Version 1	**96**	**11.74**	**.464**	**4.54**	**10.82**	**12.66**
Version 2	**96**	**15.64**	**.304**	**2.98**	**15.03**	**16.24**
Difference		**-3.90**	**.555**		**-4.99**	**-2.801**

	Ha: diff < 0	**Ha: diff !=0**	**Ha: diff > 0**
	Pr (T < t) = 0.000	**Pr (|T| < |t|) = 0.000**	**Pr (T > t) = 1.000**

Table C.2 Video Version Comparison, between videos – High Status Avatar

	Obs	Mean	Std. Error	Std. Deviation	95% Confidence Interval	
Lo_Value	**96**	**12.19**	**.434**	**4.54**	**11.33**	**13.05**
Hi_Value	**96**	**15.19**	**.369**	**3.58**	**14.46**	**15.91**
Difference		**-.448**	**.635**		**-4.12**	**-1.88**

	Ha: diff < 0	**Ha: diff !=0**	**Ha: diff > 0**
	Pr (T < t) = 0.000	**Pr (|T| < |t|) = 0.000**	**Pr (T > t) = 1.000**

Table C.3 Video Version Comparison, Version 1

	Obs	Mean	Std. Error	Std. Deviation	95% Confidence Interval	
Lo_Value	**96**	**11.74**	**.463**	**4.54**	**10.82**	**12.66**
Hi_Value	**96**	**12.18**	**.434**	**4.25**	**11.34**	**13.05**
Difference		**-.448**	**.635**		**-1.700**	**.805**

	Ha: diff < 0	**Ha: diff !=0**	**Ha: diff > 0**
	Pr (T < t) = 0.2407	**Pr (|T| < |t|) = 0.481**	**Pr (T > t) = 0.759**

Table C.4 Video Version Comparison, Version 2

	Obs	Mean	Std. Error	Std. Deviation	95% Confidence Interval	
Lo_Value	**96**	**15.64**	**.304**	**2.98**	**15.03**	**16.24**
Hi_Value	**96**	**15.19**	**.366**	**3.54**	**14.46**	**15.91**
Difference		**-.448**	**.476**		**-.49**	**1.39**

	Ha: diff < 0	**Ha: diff !=0**	**Ha: diff > 0**
	Pr (T < t) = 0.826	**Pr (|T| < |t|) = 0.348**	**Pr (T > t) = 0.174**

APPENDIX D: AVATAR NORMING STUDY

University of South Carolina students rated the attractiveness of a selection of avatars in return for extra credit in select courses. A total of 20 participants were recruited for the norming study. The age of participants was 19-26, with most being 19. A majority of the participants were female. The most common major was nursing, with 5 participants claiming it as their major.

The avatars were found at the website ICONSDB.com (https://www.iconsdb.com/). A total of 20 avatars were selected from the website. Each participant rated each avatar in terms of their interestingness, value, visual attractiveness, and how much that individual would like to be represented by the avatar. All ratings were done using a 1 to 5 point Likert scale in which participants claimed agreement or disagreement with a statement saying that the avatar was one of the Likert statements. The results from the study, some summary statistics, and discussion on avatar selection is below.

General mean comparisons and a one-way ANOVA were carried out to test the attractiveness and similarity of the avatars. The ANOVA results are not reported because meaningful interpretation of the ANOVAs was difficult due to small sample sizes and large standard deviations. Because of this only the means were considered when selecting the avatars.

In the end, the items measuring how interesting and visibly pleasing avatars were used as the metric to decide which avatars to include. The logic behind this was that both interesting and attractive avatars would keep participants attention during the study. Avatars with the highest and most similar means were selected with the assumption that these would be similar enough in attractiveness during day to day interaction as not to draw undue attention or preference from participants. In the end, the Aperture, Eye, Light, and Sun avatars were chosen.

Table D.1 Means and Standard Errors of Avatar

	Interesting	Valuable	Pleasing	Represent
2 x 2 cube	2.8 (.26)	2.8 (.22)	3.1 (.24)	2.6 (.23)
3 x 3 cube	3 (.30)	2.8 (.26)	3.4 (.18)	2.25 (.22)
Aperture	3.9 (.14)	2.85 (.23)	4.3 (.16)	2.9 (.22)
Basket	3.05 (.26)	3.2 (.24)	2.9 (.25)	2.35 (.21)
Beaker	3.25 (.20)	3.6 (.18)	3.25 (.18)	2.8 (.23)
Bolt	3.6 (.21)	3.55 (.20)	3.4 (.20)	3.3 (.26)
Bug	3.5 (.24)	2.9 (.20)	3.35 (.21)	2.4 (.26)
Compass	3.45 (.23)	3.5 (.20)	3.25 (.18)	2.65 (.21)
Crescent	3.3 (.27)	3.3 (.22)	3.8 (.17)	3.3 (.21)
Eye	3.75 (.19)	3.6 (.18)	3.3 (.23)	2.65 (.24)
Flag	2.8 (.21)	2.95 (.18)	2.75 (.22)	2.65 (.23)
Flame	3.45 (.22)	3.15 (.20)	3.25 (.20)	3 (.21)
HF Circle	2.7 (.23)	2.8 (.22)	3.2 (.20)	2.55 (.26)
Light	3.9 (.18)	3.2 (.21)	3.5 (.18)	3.15 (.21)
Planet	3.75 (.22)	3.65 (.20)	3.55 (.26)	3.5 (.20)
Puzzle	3.35 (.21)	3.35 (.18)	3.45 (.20)	3.7 (22)
Signpost	3.15 (.21)	3.15 (.17)	2.75 (.16)	2.35 (.15)
Star	3.2 (.28)	3.5 (.24)	3.75 (.22)	3.35 (.25)
Sun	3.95 (.18)	3.05 (.18)	4.1 (.19)	3.85 (.21)