Why Do Nominal Characteristics Acquire Status Value? A Minimal Explanation for Status Construction[1]

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Why do beliefs that attach different amounts of status to different categories of people become consensually held by the members of a society? We show that two microlevel mechanisms, in combination, imply a system-level tendency toward consensual status beliefs about a nominal characteristic. (1) Status belief diffusion: a person who has no status belief about a characteristic can acquire a status belief about that characteristic from interacting with one or more people who have that status belief. (2) Status belief loss: a person who has a status belief about a characteristic can lose that belief from interacting with one or more people who have the opposite status belief. These mechanisms imply that opposite status beliefs will tend to be lost at equal rates and will tend to be acquired at rates proportional to their prevalence. Therefore, if a status belief ever becomes more prevalent than its opposite, it will increase in prevalence until every person holds it.

INTRODUCTION

Status shapes much of social life. Status organizes cooperative social interaction and is an important form of social inequality with consequences for how people are evaluated, rewarded, and accorded influence (Ridgeway and Walker 1995; Correll and Ridgeway 2003). Accordingly, soci-

ologists have long been interested in characteristics of individuals, such as sex and race, to which people of a society consensually assign status value (Veblen [1899] 1998; Du Bois [1903] 1996; Weber [1921] 1946; McKee and Sherriffs 1957; Strodtbeck, James, and Hawkins 1957). A critical question is why these characteristics come to have status value. Ridgeway (1991) proposed status construction theory as one answer to this question. Several studies seeking to clarify (Ridgeway and Balkwell 1997; Ridgeway et al. 1998; Ridgeway and Erickson 2000), generalize (Webster and Hysom 1998), or otherwise improve (Jasso 2001; Berger and Fişek 2006) Ridgeway's answer have followed.

We seek to advance these efforts. We call attention to the fact that two plausible mechanisms, each of which plays a role in past formulations of status construction theory, by themselves create a tendency toward consensual status beliefs: (1) A person who has no status belief about a characteristic can acquire a given status belief about that characteristic from interacting with one or more people who have that status belief (*status belief diffusion*). (2) A person who has a status belief about a characteristic can lose that belief from interacting with one or more people who have the opposite status belief (*status belief loss*). We develop and analyze three simple mathematical models to demonstrate that the combination of these mechanisms creates a tendency toward consensual status beliefs.

Our explanation reveals two facts about the emergence of consensual status beliefs. First, no individual or category-level differences with respect to any exogenously status-relevant variable are necessary for consensual status beliefs to emerge. According to previously offered explanations, the emergence of consensual status beliefs requires individual and category-level differences with respect to some exchangeable resource (Ridgeway 1991) or some other consensually valued object or characteristic—for example, physical attractiveness, years of education, or skill in mathematics, public speaking, or athletics (Webster and Hysom 1998; Jasso 2001; Berger and Fişek 2006).[2] Second, the status value attached to a nominal characteristic can be completely arbitrary. That is, consensual status beliefs can emerge even when each category of the nominal characteristic has the same probability of becoming the high-status category. According to earlier explanations, how categories differ with respect to

[2] Although our explanation does not require any individual or category-level difference with respect to any exogenously status-relevant variable, there are cases for which our explanation requires an initial perturbation off of the unstable boundary that separates two basins of attraction. The requirement for such a perturbation, which in systems of finite size can originate endogenously under our model, differs from the exogenous and quantitatively meaningful differences required by previously offered explanations. Following presentation of our main model below, we discuss the details and interpretation of this requirement.

the exogenously status-relevant variable determines which category will become high status (Ridgeway 1991; Ridgeway and Balkwell 1997; Webster and Hysom 1998; Jasso 2001; Berger and Fişek 2006). In short, the category with higher (and more widely dispersed [Jasso 2001]) values on the exogenously status-relevant variable becomes the high-status category.[3] This feature of earlier explanations implies that we can reason backward from an observed status difference between categories of people to some meaningful difference between those categories of people that generated the observed status difference. In effect, earlier explanations for status differences imply that these differences are never arbitrary; they always reflect a preexisting difference on some exogenously status-relevant variable. In contrast to these explanations, our explanation shows how it is possible for an arbitrary status difference to emerge. Therefore, our analysis demonstrates that we cannot infer an underlying meaningful difference between categories of people from an observed status difference between those categories of people.

THEORETICAL FOUNDATIONS

Our explanation for the attachment of status value to a nominal characteristic is a minimal formulation of status construction theory. The three microinteractional assumptions and two macrostructural conditions on which our explanation rests are a subset of the microinteractional assumptions and macrostructural conditions of earlier formulations of status construction theory (Ridgeway 1991; Ridgeway and Balkwell 1997; Webster and Hysom 1998). The three microinteractional assumptions summarize the core results of three related research programs: Bales's pioneering program on social interaction in small cooperative groups, the expectation states theoretical research program, and Ridgeway's investigations of status construction.

Status Hierarchy Emergence Assumption

Status hierarchies emerge in cooperative social interaction.

Bales's (1950, 1970) research showed that hierarchies of status and influence emerge in small groups of individuals cooperating to achieve a col-

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[3] In the work of Ridgeway (1991) and Ridgeway and Balkwell (1997), the category of N that has the higher proportion of resource-rich actors becomes the high-status category. For Jasso (2001), the category with higher average first-order status, which is a positive logarithmic function of an individual's rank position with respect to the exogenously status-relevant variable, becomes the high-status category.

lective goal. That is, a pattern of interactional inequality emerges that rank orders members of the group; relative to an individual lower in the status ranking, an individual higher in the status ranking speaks more often, is perceived as more competent, has more influence over group decisions, and is viewed by other group members as more worthy.[4] An important fact about the cooperative groups in which Bales observed the emergence of status hierarchies was that these groups were composed of white, male college students. Thus, these groups were homogeneous with respect to several important status characteristics, including sex, race, age, and education. Although we cannot know that these groups were homogeneous with respect to all status-relevant characteristics (in fact, we can reasonably infer that differences with respect to competence, interactional style, or physical attractiveness did exist within these groups), the routine emergence of status hierarchies in these relatively homogeneous groups suggests that the tendency toward status hierarchy in cooperative social interaction is robust.

We employ this robust empirical observation as a theoretical assumption that there is a tendency for status hierarchies to emerge in cooperative social interaction. We can adopt a strong or a weak specification of this assumption. The weak specification says that a hierarchy emerges if and only if there is status inequality between the interactants as they enter the interaction. The strong specification says that a hierarchy emerges regardless of whether the interactants are of unequal status on entering the interaction. We consider both specifications, as well as intermediate forms, in our analysis below.

Status Belief Effect Assumption

> *Status beliefs and the characteristics those beliefs are about affect the positions people come to occupy in the status hierarchies that emerge in cooperative social interaction.*

Empirical research shows that characteristics of individuals such as sex (Strodtbeck et al. 1957; Pugh and Wahrman 1983; Wagner, Ford, and Ford 1986), race (Webster and Driskell 1978), age (Freese and Cohen 1973), and educational attainment (Moore 1968) affect the positions those individuals come to occupy in the status hierarchies that emerge in co-

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[4] Note that a status hierarchy is a hierarchy of multiplex relations. If person 1 occupies a higher-status position in a status hierarchy than person 2 does, then person 1 is perceived as more competent, has more influence over group decisions, and is viewed as more worthy than person 2. Thus, an influence hierarchy is a component of a status hierarchy, as is a hierarchy of collective perceptions of competence, and a hierarchy of collective perceptions of worth.

operative social interaction. Berger et al. (1977) labeled any characteristic that had such an effect a *status characteristic*.

To explain the emergence of status hierarchies in small, cooperative groups and to explain the effects that various factors (including status characteristics) had on the positions individuals came to occupy in these hierarchies, Berger and colleagues developed expectation states theory (Berger, Conner, and Fişek 1974; Berger and Zelditch 1998). The core argument is that in small groups of people oriented toward achieving a collective goal, people behave as if they form expectations (performance expectations) about the relative values of the contributions different members of the group are likely to make toward the achievement of the group's collective goal. To form a performance expectation for oneself or for another member of the group, one uses all the information one has about that person, including information one has about that person's status characteristics, such as age, race, sex, and education. The theory argues that people behave as if they hold beliefs (called *status beliefs*) that individuals who belong to higher-status categories of status characteristics (e.g., middle-age white male college graduates) are generally more competent and generally more likely to make valuable contributions to achievement of collective goals than individuals who belong to lower-status categories of status characteristics.[5]

Although the concept of the status belief was originally developed to explain the effects of status characteristics, Ridgeway (1991) used the effects of status beliefs to help explain how a nominal characteristic could become a status characteristic—that is, could acquire status value. The first step is recognizing that status beliefs provide an alternative basis for defining a status characteristic: Any socially recognized characteristic on which individuals differ and for which there are widely held beliefs in the society that attach different anticipated levels of competence and worthiness to different categories or values of the characteristic (i.e., about which there are consensual status beliefs) is a status characteristic (Correll and Ridgeway 2003). This definition is helpful for thinking about answers to the question of how a nominal characteristic that is not a status characteristic could become a status characteristic because it clarifies the possibility of situations in which some but not all people believe that one category is higher status than the other. Only when the vast majority of

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[5] One of the most interesting and important findings of experimental research on status is that even individuals who are members of the low-status category defined by a status characteristic behave as if they believe that members of the high-status category are more competent than members of the low-status category (Ridgeway 1991). For example, Pugh and Wahrman (1983) found that women were more likely to defer to the opinion of a fictitious partner when they believed that their partner was male than when they believed that their partner was female.

individuals hold (or under the extreme and simple criterion we adopt in our analysis below, when every individual holds) the same status belief about a nominal characteristic is that nominal characteristic a status characteristic.

Recognizing that an individual can hold a status belief that is not widely held permits clear specification of the status belief effect assumption. First, we introduce some notation that we will use throughout the article. We consider the attachment of status value to a nominal characteristic, N, which has two values—A and B. That is, some individuals are $N = A$; the rest are $N = B$. Each person may or may not hold a status belief, S, about N. A person may believe that $N = A$'s are higher status than $N = B$'s ($S = A$), may believe that $N = B$'s are higher status than $N = A$'s ($S = B$), or may hold no status belief about N ($S = O$). It is also helpful to focus on social interaction that occurs within dyads—groups composed of two individuals.

Now we can illustrate the status belief effect assumption with precision. Suppose that two individuals who differ with respect to N meet to interact. If one of them believes that A is higher status than B ($S = A$) and the other holds no status belief about N ($S = O$) or if both individuals hold status belief A ($S = A$), then if a status hierarchy emerges, the individual who is $N = A$ is more likely to occupy the high-status position than the individual who is $N = B$. What is critical here for status construction is that a status belief held by one interactant affects the emergence of a status hierarchy that is experienced by both interactants (Ridgeway 1991).

Status Belief Change Assumption

> *Status hierarchies that differentiate between interactants who differ with respect to a characteristic can affect interactants' status beliefs about that characteristic.*

Ridgeway (1991) argues that the relative positions the members of a small cooperative group occupy within the group's status hierarchy affect those individuals' perceptions of their relative levels of competence. Higher-status individuals are perceived as more competent than lower-status individuals. When two individuals distinguished from each other by a status hierarchy also differ from each other with respect to a nominal characteristic, the microlevel association between status and the nominal characteristic within that interactional setting creates information about how the status and competence of individuals are related to the nominal characteristic. This information can affect the status belief of a person involved in the interaction in two different ways: (1) If the person holds no status belief coming into the interaction, the person can acquire the status belief

that is consistent with the immediate microlevel association between status and the nominal characteristic. (2) If the person comes into the interaction holding the status belief that is the opposite of the belief that is consistent with the immediate microlevel association between status and the nominal characteristic, then the person can lose her or his status belief.

Macrostructrual Conditions for Status Construction

These three microinteractional assumptions imply a tendency toward consensual status beliefs about a nominal characteristic if two macrostructural conditions, emphasized in earlier work (Ridgeway 1991; Ridgeway and Balkwell 1997; Webster and Hysom 1998), are met. First, social interaction occurs in small groups (e.g., dyads) repeatedly drawn from the larger population, connecting the entire population over time.[6] Second, there is heterogeneity with respect to some nominal characteristic (N). Heterogeneity with respect to N is necessary for there to be N-dissimilar encounters, which make status belief change possible.

MECHANISMS OF STATUS BELIEF CHANGE

Under these two structural conditions, our three assumptions imply three microlevel mechanisms with important consequences for system-level patterns of status beliefs. Two of these mechanisms—status belief diffusion and status belief loss—form our core argument. The third mechanism—status belief generation—complements our core argument.[7]

Status Belief Diffusion

In her initial presentation of status construction theory, Ridgeway (1991) proposed that status beliefs could diffuse. Diffusion is the process by which a person who initially holds no status belief acquires a given status belief by interacting with a person who holds that status belief. The diffusion mechanism is implied by the three assumptions of status construction theory outlined above. If two individuals who differ with respect to a

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[6] Ridgeway (1991) does not explicitly identify this condition as one of the initial structural conditions (pp. 371–72). However, she devotes substantial attention to this structural condition in her discussion of interaction patterns (p. 373) and the diffusion process (pp. 375–77, 379).

[7] Though alternative mechanisms could perform the same explanatory function, the implied status belief generation mechanism shares the logic of our core argument more than viable alternatives do, and the status belief generation mechanism closely parallels, in function and logic, a key feature of Ridgeway's status construction theory—double dissimilar encounters.

nominal characteristic interact with each other, and if one of them holds a status belief about the nominal characteristic on entering the interaction but the other does not, then one actor has a status advantage within the dyad.[8] A status hierarchy is expected to emerge (by the status hierarchy emergence assumption) with the actor favored by the status belief in the high-status position (by the status belief effect assumption). The status hierarchy's differentiation between two actors who differ with respect to the nominal characteristic creates information about the relative status of the two values of the nominal characteristic. This information corresponds with the status belief held by one of the actors on entering the interaction; it is this status belief that shaped the status hierarchy that emerged. By the status belief change assumption, the actor who held no status belief on entering the interaction may acquire the status belief corresponding to the correlation within the dyad between status and the nominal characteristic. In other words, the actor who entered the interaction holding no status belief may acquire the status belief held by the other actor on entering the interaction. Thus, the status belief may diffuse from one actor to another.

Status Belief Loss

Status belief loss is essential to status construction theory's explanation for the attachment of status value to a nominal characteristic. In Ridgeway's (1991) formulation of status construction theory as well as in our present formulation, it is possible that individuals will hold opposite status beliefs. Thus, it is necessary for some individuals to lose status beliefs they hold if a consensual status belief is to emerge. Ridgeway suggested that status belief loss would occur when individuals holding one status belief interacted with individuals holding the opposite belief.[9] This mechanism of status belief loss is implied by the three core assumptions of status construction theory outlined above. If N-dissimilar actors with opposite status beliefs meet to interact, the outcome of the interaction—either a status hierarchy emerges or it does not—will provide evidence that is inconsistent with at least one of the actors' status beliefs. The emergence of a status hierarchy disconfirms one actor's belief because one hierarchy must be inconsistent with one of the two opposite beliefs. Al-

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[8] The status-advantaged actor may be the actor who holds the status belief (if the status belief favors the value of the nominal characteristic of the actor who holds it) or the actor who holds no status belief (if the status belief favors the other value of the nominal characteristic).

[9] See Ridgeway's (1991, p. 378) discussion of how "performance-expectation associations . . . cancel out a like number of . . . [the opposite] association."

ternatively, if no status hierarchy emerges, the interaction will disconfirm both actors' beliefs because neither actor sees the consensual inequality implied by her belief. By the status belief change assumption, this disconfirmation can cause an individual to lose her disconfirmed status belief.

Of course, in the real world, where situations are more complex than in the theoretical analysis we develop here, encountering an individual who holds the opposite status belief is not the only event that could cause a person to encounter evidence that disconfirms her status belief. For example, a person could meet an especially competent member of a low-status category or an especially incompetent member of a high-status category. Nevertheless, in the simplest possible case of status construction (i.e., one in which there are no differences between individuals in competence, resources, or any other factor with exogenous status relevance), the only thing that could cause a person to encounter status belief disconfirming evidence is the opposite status belief. Any other source of status belief disconfirming evidence would require individual or category differences with respect to an exogenously status-relevant characteristic. We seek to explain how a characteristic can acquire status value *without* the existence of preexisting category or individual differences.

Status Belief Generation

A key feature of Ridgeway's (1991) initial presentation of status construction theory was her argument that status beliefs could be generated in social interaction between individuals who entered the interaction holding no status beliefs. Ridgeway argues that this process of status belief generation could occur in social interaction between individuals who differed with respect to N and differed with respect to the amount of some resource they possessed—in "double dissimilar encounters." The difference in resources affected the positions the actors occupied in the emergent status hierarchy, with the resource-rich actor more likely to occupy the high-status position. Because the actors differ with respect to N, the emergent status hierarchy creates a dyad-level correlation between N and status. The resource difference is what drives this correlation, but the actors misattribute the source of the status difference to their difference with respect to N and form the corresponding status belief.

Although our three assumptions do not include an effect of resources or any other exogenously status-relevant individual differences, a mechanism of status belief generation follows from them as long as we take the status hierarchy emergence assumption to imply a nonzero probability that a status hierarchy will emerge when individuals who meet as status equals interact. That is, a mechanism of status belief generation follows from our assumptions if we adopt any but the weakest of potential spec-

ifications of the status hierarchy emergence assumption. According to the status hierarchy emergence assumption, if a status hierarchy emerges in interaction between individuals who enter the interaction as status equals, each of the individuals is equally likely to emerge as the occupant of the hierarchy's high-status position. If a status hierarchy emerges in social interaction between N-dissimilar individuals who are status equals on entering the interaction, the interactants will experience a dyad-level correlation between N and status. By the status belief change assumption, it is possible for one or both actors to acquire the status belief that corresponds with the dyad-level status-N correlation.

A MINIMAL STATUS CONSTRUCTION MODEL

Above, we claimed that the combined processes of status belief diffusion and status belief loss are sufficient to account for a system-level tendency toward consensual status beliefs. And we claimed that these mechanisms along with a mechanism of status belief generation follow from three fundamental assumptions of status construction theory: status hierarchy emergence, status belief effect, and status belief change. This section and the discussion section that follows seek to make these claims more compelling with a rigorous analysis illustrating them. This section develops and analyzes a simple model of status construction based on the three status construction assumptions outlined above. We find a strong tendency toward consensual status beliefs. (The states of consensual status beliefs are attractors surrounded by basins of attraction that together constitute almost the entire state space.) In the discussion section that follows, we discuss what is new and important about this result and conduct an analysis of two simpler models to help illustrate why our status construction model tends toward states of consensual status beliefs and, more generally, why status belief diffusion and status belief loss create a tendency toward consensual status beliefs.

A Simplifying Strategy

Our status construction model is simple. Our goal is not to describe the historical process by which any particular status characteristic actually came to have status value. Instead, we want to capture the minimal elements of the status construction argument that are sufficient to create a consensual status belief.

Actor Characteristics and the Structure of Social Interaction

We assume that a nominal characteristic, N, evenly divides the population into two categories of actors: for half of the actors, $N = A$; for the other half, $N = B$. We assume that an actor may or may not hold a status belief about N. At any moment, an actor's status belief, S, about N takes one of three values: (1) an actor may believe that category A is higher status than category B ($S = A$), (2) an actor may believe that category B is higher status than category A ($S = B$), (3) or an actor may hold no status belief about N ($S = O$). Crossing the values of the two variables that characterize actors—N (takes the value A or B) and S (takes the value A, B, or O)—yields six categories of actor identified in table 1.

  Our model is iterative. In each iteration, or round, actors are paired for social interaction. Each actor interacts with her partner, and her status belief is adjusted (or remains unchanged) according to the three status construction assumptions as specified below.

Selection of Interactants

At the beginning of each round, partners for social interaction are selected. We adopt the simplest specification of Ridgeway's (1991) structural condition that social interaction occurs in small groups repeatedly drawn from a larger population: All social interaction occurs in dyads that are selected each round by an unbiased random process. Each round, every actor is paired with exactly one other actor.

Social Interaction and Consequences for Actors' Status Beliefs

According to status construction theory, when two individuals meet, their nominal characteristics and status beliefs before interaction have consequences for how their status beliefs may or may not change. If the individuals differ with respect to the nominal characteristic, the emergence of a status hierarchy within the dyad or the failure of a status hierarchy to emerge creates information[10] about the relative status of the values of the nominal characteristic. This information can cause a person who holds no status belief to acquire the corresponding belief and can cause a person

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[10] According to status construction theory, this information need not be objectively accurate. In fact, we set up the model so that any information that one category of people is generally more competent than another is false. What is interesting about the theory is that it explains how local interactional settings can create this false information, which shapes real events, perpetuating this false information and creating a social reality that is independent of the material reality from which it arose.

TABLE 1
Six Categories of Actor Generated by Crossing N and S

Actor's Value on the Nominal Characteristic (N)	Actor's Status Belief (S)	Label for Category and Type of Actor	Description of Actors in N-S Category
A	A	AA	Actors who are $N = A$ and believe $N = A$ is higher status than $N = B$
A	B	AB	Actors who are $N = A$ and believe $N = B$ is higher status than $N = A$
A	O	AO	Actors who are $N = A$ and who hold no status belief about N
B	A	BA	Actors who are $N = B$ and believe $N = A$ is higher status than $N = B$
B	B	BB	Actors who are $N = B$ and believe $N = B$ is higher status than $N = A$
B	O	BO	Actors who are $N = B$ and who hold no status belief about N

who holds a status belief that is disconfirmed by this information to lose that belief. Details of our model's specification of this process follow.

Status Hierarchy Emergence

When two actors meet, a status hierarchy may emerge, and actors' status beliefs and values of N affect the positions they will occupy in any status hierarchy that does emerge. In formalizing these ideas, we distinguish between two types of cases that can exist when the actors enter the dyad: (1) one actor has a status advantage over the other or (2) neither actor has a status advantage. If the actors differ with respect to N and exactly one of them holds a status belief or if both actors hold the same status belief, then one actor has a status advantage on entering the dyad. In this case, our model assumes that a status hierarchy emerges with certainty, and the actor advantaged by the status belief(s) of one or both actors will occupy the high-status position in the status hierarchy that emerges. If the actors who meet are N-dissimilar and if neither holds a status belief, or they hold opposite status beliefs, then neither actor has a status advantage on entering the dyad. In this case, our model assumes that a status hierarchy emerges with probability e, $0 \le e \le 1$. If a status hierarchy emerges, each actor is equally likely to be the high-status actor.[11]

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[11] When N-similar actors meet, the interactional outcomes have no consequences for the actors' status beliefs. However, for completeness, it is good to note that when N-similar actors meet, neither actor has a status advantage, so a status hierarchy emerges with probability e, and each actor is equally likely to become the high-status actor.

Status Belief Acquisition and Loss.

If an actor who holds no status belief interacts with an N-dissimilar actor and a status hierarchy emerges, then the first actor acquires the corresponding status belief with probability a, $0 < a \leq 1$. (If the other actor also entered the dyad holding no status belief, then that actor also acquires the corresponding status belief with probability a.)[12] If an actor who holds a status belief interacts with an N-dissimilar actor and the interactional outcome disconfirms the actor's status belief, she loses her status belief with probability l, $0 < l \leq 1$. A social interactional outcome can disconfirm an actor's status belief in two different ways. First, the status belief is disconfirmed if a status hierarchy emerges and the value of N the actor believes is low status is the value of N of the actor in the high-status position and the value of N the actor believes is high status is the value of N of the actor in the low-status position. Second, the status belief is disconfirmed if the interactants are N-dissimilar and no status hierarchy emerges.[13] (If both interactants enter the dyad holding status beliefs, the emergence of no status hierarchy disconfirms each actor's status belief. Each actor loses her belief with probability l, and the potential loss of each actor's belief is probabilistically independent of the other's.)

Three Mechanisms of Status Belief Change

When combined, the assumptions about status hierarchy emergence, status belief effects, and status belief change imply mechanisms of status belief diffusion, status belief loss, and status belief generation. The values of the parameters of status hierarchy emergence (e), status belief acquisition (a), and status belief loss (l) introduced above determine the probabilities of status belief diffusion, loss, and generation under the respective conditions that make these events possible.

   Diffusion.—According to our model, when two N-dissimilar actors meet, exactly one of whom holds a status belief about N, the actor who entered the interaction holding no status belief acquires the status belief held by the other actor with probability a. The reason is that when exactly one of two N-dissimilar actors holds a status belief about N, one actor is advantaged by that status belief and a status hierarchy emerges with the advantaged actor in the high-status position. The emergence of this status hierarchy creates a correlation between N and status within the dyad that

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[12] We assume that this event is probabilistically independent of whether the first actor acquires the status belief. However, alternative assumptions do not affect the substantive implications of our model.

[13] Such evidence of equality (and absence of consensual inequality) between N-dissimilar actors disconfirms a belief that one value of N is higher status than the other.

corresponds with the status belief held by one actor on entering the dyad. The information created by this dyad-level correlation causes the actor who entered the dyad holding no status belief to acquire the corresponding status belief with probability a.

Loss.—According to our model, if N-dissimilar actors who hold opposite status beliefs meet, each actor loses her belief with probability $l \times [1 - (e/2)]$. Because the actors hold opposite status beliefs, neither actor has a status advantage on entering the dyad.[14] A status hierarchy emerges with probability e. If a status hierarchy emerges, exactly one actor's status belief is disconfirmed, and each actor's status belief is equally likely to be disconfirmed. Therefore, the probability that a given actor's status belief is disconfirmed by the emergence of the noncorrespondent status hierarchy is $e/2$. If a status hierarchy does not emerge, each actor's status belief is disconfirmed by the failure of a status hierarchy to emerge between N-dissimilar actors (probability equals $1 - e$). Thus, the probability that a given actor encounters status belief disconfirming evidence is $1 - e + (e/2) = 1 - (e/2)$. Given than an actor encounters status belief disconfirming evidence, the probability that she loses her status belief is l. Therefore, the probability that an actor who holds a status belief and encounters an N-dissimilar actor holding the opposite belief loses her belief is $l \times [1 - (e/2)]$.

Generation.—If N-dissimilar actors meet and neither holds a status belief, status belief generation may occur. Each actor acquires a status belief with probability $e \times a$. Given that neither actor enters the dyad with a status belief, the actors are initially status equals. Thus, the probability that a status hierarchy emerges is e. Given that the interactants are N-dissimilar, if a status hierarchy emerges, it creates a dyad-level correlation between N and status. Thus, for each actor, the probability of acquiring the status belief corresponding with the dyad-level correlation between N and status, given that a status hierarchy has emerged, is a. Therefore, the probability of acquiring a status belief for an actor who holds no status belief who encounters an N-dissimilar actor who also holds no status belief is the product of the probability that a status hierarchy emerges (e) and the probability that an actor who holds no status belief acquires one given a dyad-level correlation between N and status (a). (Given that the interactants in such a dyad are initially status equals, each status belief—$N = A$ higher status than $N = B$ and $N = B$ higher status than $N = A$—is equally likely to be acquired.)

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[14] In our model, nothing but status beliefs about N can give one actor a status advantage over another. In an N-dissimilar dyad in which actors hold opposite status beliefs, each actor is favored by exactly one status belief.

Summary of Microlevel Outcomes of Social Interaction

According to our model, the set of possible outcomes of social interaction between two actors is determined by the nominal characteristic-status belief categories to which the two interactants belong as they enter the interaction. Table 2 summarizes the sets of possible outcomes for an actor of the type indicated by the row who encounters an actor of the type indicated by the column. The status beliefs of actors who meet N-similar actors do not change. An actor who holds no status belief and meets an N-dissimilar actor who holds a status belief acquires that status belief with probability a (diffusion). An actor who holds a status belief and meets an N-dissimilar actor who holds the opposite status belief loses her status belief with probability $[1 - (e/2)]l$ (loss). An actor who holds no status belief and meets an N-dissimilar actor who holds no status belief acquires a new status belief with probability $e \times a$ (generation).

Macrolevel Dynamic Behavior of Model

We analyze our model as a dynamic system (Luenberger 1979; Fararo 1989; Drazin 1992). The system of difference equations implied by the model indicates the proportions of actors with different status beliefs for each value of N. Given any distribution of people across the six combinations of N and S, the difference equations tell us the expected proportions of actors in each of these categories in the next round. There is one equation in the system for each of the six N-S categories of actor. The equation corresponding to a given category of actor tells the proportion of actors who will be in that category at time $t + 1$ based on the proportions of actors in each of the six categories at time t. These equations provide a deterministic approximation of our stochastic model that becomes increasingly accurate as system size increases (Coleman 1964). The strength of this approach is its ability to directly capture the expected behavior of the model; its weakness is its failure to capture stochastic departures from the model's expected behavior, which in some cases, especially those of small systems, can be a substantively significant component of a model's behavior. We take these facts into account below as we interpret the results of our analysis.

FOCAL ACTOR'S VALUES OF N AND S AT BEGINNING OF ROUND	PARTNER'S VALUES OF N AND S AT BEGINNING OF ROUND					
	AA	AO	AB	BA	BO	BB
AA	AA*	AA	AA	AA	AA	AO,† $p = [1-(e/2)]l$ AA, $p = 1-[1-(e/2)]l$
AO	AO	AO	AO	AA, $p = a$ AO, $p = 1-a$	AA, $p = ea/2$ AB, $p = ea/2$ AO, $p = 1-ea$	AB, $p = a$ AO, $p = 1-a$
AB	AB	AB	AB	AO, $p = [1-(e/2)]l$ AB, $p = 1-[1-(e/2)]l$	AB	AB
BA	BA	BA	BO, $p = [1-(e/2)]l$ BA, $p = 1-[1-(e/2)]l$	BA	BA	BA
BO	BA, $p = a$ BO, $p = 1-a$	BA, $p = ea/2$ BB, $p = ea/2$ BO, $p = 1-ea$	BB, $p = a$ BO, $p = 1-a$	BO	BO	BO
BB	BO, $p = [1-(e/2)]l$ BB, $p = 1-[1-(e/2)]l$	BB	BB	BB	BB	BB

* Each cell indicates the focal actor's values of N and S at the end of the round. (An actor's value of N is always the same value it was at the beginning of the round.)

† In cases in which more than one outcome is possible, the probability of each possible outcome is indicated.

The system of six difference equations is as follows:

$$pAA_{t+1} = pAA_t - [1 - (e/2)](l)(pAA_t)(pBB_t) + a(pAO_t)(pBA_t)$$
$$+ (ea/2)(pAO_t)(pBO_t), \tag{1a}$$

$$pAO_{t+1} = pAO_t - a(pAO_t)(pBA_t + pBB_t) - ea(pAO_t)(pBO_t)$$
$$+ [1 - (e/2)](l)[(pAA_t)(pBB_t) + (pAB_t)(pBA_t)], \tag{1b}$$

$$pAB_{t+1} = pAB_t - [1 - (e/2)](l)(pAB_t)(pBA_t) + a(pAO_t)(pBB_t)$$
$$+ (ea/2)(pAO_t)(pBO_t), \tag{1c}$$

$$pBA_{t+1} = pBA_t - [1 - (e/2)](l)(pBA_t)(pAB_t) + a(pBO_t)(pAA_t)$$
$$+ (ea/2)(pBO_t)(pAO_t), \tag{1d}$$

$$pBO_{t+1} = pBO_t - a(pBO_t)(pAA_t + pAB_t) - ea(pBO_t)(pAO_t)$$
$$+ [1 - (e/2)](l)[(pBB_t)(pAA_t) + (pBA_t)(pAB_t)], \tag{1e}$$

$$pBB_{t+1} = pBB_t - [1 - (e/2)](l)(pBB_t)(pAA_t) + a(pBO_t)(pAB_t)$$
$$+ (ea/2)(pBO_t)(pAO_t), \tag{1f}$$

where pAA_t is the proportion of actors who are of type AA (i.e., for whom $N = A$ and $S = A$) at time t and the proportions of actors of each of the five other types are labeled correspondingly.

Analysis of this system of equations[15] indicates that there are exactly two attractor equilibria—the two states of consensual status belief. One is the state in which $pAA = .5$ and $pBA = .5$ (and $pAO = pAB = pBO = pBB = 0$)—in other words, the state in which every actor believes that category A is higher status than category B. The other is the state in which $pAB = .5$ and $pBB = .5$ (and $pAA = pAO = pBA = pBO = 0$)—the state in which every actor believes that category B is higher status than category A. The set of states from which a system is expected to move ever closer to the $pAA = pBA = .5$ attractor and the set of states from which a system is expected to move ever closer to the $pAB = pBB = .5$ attractor (i.e., the two attractors' basins of attraction) are large. Together, they constitute nearly all of the model's state space. The only states that are not in one of these basins of attraction are those that lie on the boundary between them. This boundary is the set of states for which either $pAA = pAB$ and $pBA = pBB$ or $pAA = pBB$ and $pAB = pBA$. On this boundary, opposite status beliefs are equally prevalent and

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[15] Online app. A presents the details of our analysis.

neither status belief is predicted to increase in prevalence relative to its opposite belief. However, any perturbation off of this boundary puts a system in one attractor's basin of attraction or the other's, and the corresponding consensus will emerge.

These results indicate a strong tendency for consensual status beliefs to emerge. From almost any state (any state other than those for which either $pAA = pAB$ and $pBA = pBB$ or $pAA = pBB$ and $pAB = pBA$), the expected behavior of the model is to move ever closer to a state of consensual status beliefs.[16]

Are Status Belief Diffusion and Loss Really Sufficient to Explain Consensual Status Beliefs?

As noted above, our central claim is that mechanisms of status belief diffusion and status belief loss are together sufficient to account for a strong tendency toward consensual status beliefs about a nominal characteristic, even when there are no individual or category-level differences with respect to any exogenously status-relevant characteristic. Accordingly, the fact that our model includes a mechanism of status belief generation in addition to mechanisms of diffusion and loss is likely to raise concerns about the validity of our claim that diffusion and loss are sufficient. The presence of the boundary between the basins of attraction for the states of consensual status belief—that is, the set of states for which $pAA = pAB$ and $pBA = pBB$ or $pAA = pBB$ and $pAB = pBA$—may raise similar concerns. A system positioned anywhere on this boundary is expected to stay on this boundary indefinitely in the absence of endogenous and exogenous perturbations away from the system's expected behavior. This section clarifies how these facts are compatible with our claim that diffusion and loss are sufficient to account for a strong tendency toward consensus.

First, does our inclusion of a status belief generation mechanism destroy our ability to show that diffusion and loss are sufficient to account for a strong tendency toward arbitrary consensual status belief? It does not

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[16] For example, according to our model, a system that initially occupies (or ever comes to occupy) one of the following states:

$pAA = .01$, $pAO = .49$, $pAB = 0$, $pBA = 0$, $pBO = .5$, $pBB = 0$,

$pAA = .17$, $pAO = .17$, $pAB = .16$, $pBA = .17$, $pBO = .16$, $pBB = .17$,

$pAA = .5$, $pAO = 0$, $pAB = 0$, $pBA = 0$, $pBO = .01$, $pBB = .49$

will eventually occupy the state $pAA = pBA = .5$ (and $pAO = pAB = pBO = pBB = 0$). Just as wide a variety of initial conditions lead to the state $pAB = pBB = .5$.

because we conducted our analysis across values of the parameter e, which is the probability that a status hierarchy emerges when status equals interact. That is, even when $e = 0$ (and thus there is no possibility for status belief generation), the two states of consensual status belief are attractors, and together their basins of attraction constitute the entire state space except for the states on the boundary between them. Thus, our analysis does show a strong tendency toward consensual status belief even when $e = 0$; any system with an initial condition that is not on the boundary between basins of attraction—that is, for which neither $pAA = pAB$ and $pBA = pBB$ nor $pAA = pBB$ and $pAB = pBA$—is expected to go to a state of consensual status belief.

Given that, when $e = 0$, expected trajectories from all states not on the boundary between basins of attraction lead to a state of consensual status belief, evidence against our claim that diffusion and loss are sufficient to account for a strong tendency toward consensual status belief could come only from cases for which the initial condition is on the boundary between basins of attraction.

Consider systems of finite size. For a system of finite size initially in any state for which $pAA = pAB$ and $pBA = pBB$ or $pAA = pBB$ and $pAB = pBA$ other than $pAO = pBO = .5$, an endogenous stochastic departure from the system's expected behavior is expected to move the system off of the boundary and into one basin of attraction or the other.[17] For systems of finite size, the case of a system initially at $pAO = pBO = .5$ is the only case that in any way offers counter evidence to our claim that status belief diffusion and status belief loss are together sufficient to account for a strong tendency toward consensual status belief. The expected trajectory is to stay at $pAO = pBO = .5$, and because $e = 0$, there is no endogenous stochastic movement off of the expected

[17] There are two ways our model creates such departures. One is via belief loss. When N-dissimilar actors with opposite beliefs meet, no status hierarchy emerges. (Recall $e = 0$.) The probability that exactly one of the two interactants loses her status belief is $2 \times l \times (1 - l)$. This outcome leaves more status beliefs favoring one category than favoring the other and, unless all other events combined perfectly offset this change, moves the system into one of the two attractors' basins of attraction. The other way our model creates such a departure from its expected behavior in a system of finite size is via belief diffusion. For example, the number of $N = A, S = A$ actors who meet $N = B, S = O$ actors may not be exactly the same as the number of $N = A, S = B$ actors who meet $N = B, S = O$ actors. And even if these numbers are exactly the same (if $a < 1$), the number of actors becoming $N = B, S = A$ may not exactly equal the number of actors becoming $N = B, S = B$ because the acquisition of status beliefs is probabilistic. If the number of actors acquiring belief A does not exactly equal the number of actors acquiring belief B (and if the difference is not perfectly offset by the opposite difference in numbers of beliefs lost), then the system moves into one of the two attractors' basins of attraction, and consensual status beliefs will eventually emerge.

trajectory. We want to emphasize that this counter evidence is not robust; what is additionally required to get a system off of the state $pAO = pBO = .5$ and onto an expected trajectory toward a state of consensual status belief is both minimal and easily compatible with empirical evidence and widely accepted understandings of social interaction and belief formation.

One possibility is $e > 0$. Of course, allowing $e > 0$ introduces the mechanism of status belief generation; however, the required rate of status belief generation is small. Any value of e greater than zero is sufficient. For example, we do not need to assume that when N-dissimilar actors with no status beliefs meet, status beliefs are generated with certainty, with probability .5, or even with probability .001. We would only need status belief generation to occur once in one dyad at some point in the history of a system for consensual status beliefs to emerge. Thus, any positive value of e, no matter how small, is sufficient for the system to eventually reach a state of consensual status belief. Recall that given the robust tendency toward status hierarchy in cooperative interaction among individuals who are initially status equals identified by empirical research (Bales 1950, 1970), a requirement that $e > 0$ is easily compatible empirical evidence.

Alternatively, a system of finite size that occupies the state $pAO = pBO = .5$ would eventually begin moving to a state of consensus even if $e = 0$, if by some process exogenous to our model one person came to view one value of N as higher status than the other (or a person holding such a view was introduced to the system). We emphasize that this additional requirement, like the alternative $e > 0$ additional requirement, is minimal and compatible with evidence. Social identity research indicates that individuals easily develop beliefs that favor the categories to which they belong (Tajfel 1981). Thus, it is not controversial to assume that at some point in the history of a large system, a person would develop a belief that members of her own category are generally more competent and worthy than the members of the other category. In fact, it might be more realistic to think of this spontaneous formation of a self-advantaging status belief as a normal rather than as a rare event.[18] Nevertheless, a

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[18] Of course, under an assumption that actors spontaneously form status beliefs favoring their own category, the expected movement of a system occupying the state $AO = BO = .5$ is along the boundary between the two attractors' basins of attraction—i.e., not toward either state of consensual status beliefs. However, as we noted above, in a system of finite size, the mechanisms of loss and diffusion are each predicted to move the system off of the boundary between basins of attraction via stochastic departures from the model's expected behavior. Thus, the system-level "evenhandedness" of spontaneous acquisition of self-advantaging status beliefs would not prevent this mechanism from helping to move a system of finite size out of the $AO = BO = .5$ state and into

general tendency to form status beliefs that advantage one's own category is not required. An explanation for consensual status beliefs that shows how if even just one person develops a status belief, eventually everyone will hold it explains a *strong* tendency toward consensual status beliefs. As sociologists, we are not puzzled that one person could develop and hold a crazy idea, but we are puzzled by how everyone could come to hold the same crazy idea. Assuming one person holds a status belief in no way assumes the outcome we seek to explain. The outcome we seek to explain is *consensus* that one category of people is higher status than another.[19]

DISCUSSION

The key finding of our analysis is that a minimal model based on just three plausible assumptions about status hierarchies and status beliefs shows a strong tendency toward consensual status beliefs, *even in the absence of initial differences among individuals or between categories with respect to any exogenously status-relevant characteristic*. The states of consensual status belief are the model's only attractors across the entire parameter space ($0 \leq e \leq 1$, $0 < a \leq 1$, and $0 < l \leq 1$). Together their basins of attraction compose nearly the entire state space. Several aspects of this finding warrant discussion.

What Structural Conditions Are Necessary for Status Construction?

Our analysis shows that two related conditions previously thought necessary to explain a nominal characteristic's acquisition of status value are not necessary. Previously offered explanations required exogenous individual differences with respect to some resource (Ridgeway 1991; Ridge-

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one of the attractors' basins of attraction. We have examined a variant of our model to which we have added a tendency for each actor who holds no status belief to form spontaneously a self-advantaging status belief at a constant rate and find that this tendency does not destroy the tendency toward consensual status beliefs. We report this analysis in online app. D.

[19] If one wishes to consider systems of infinitely large size, the boundary between basins of attraction is compatible with the overall tendency toward consensual status belief, but for slightly different reasons. For a system of infinite size, we cannot count on stochastic departures from the model's expected behavior to move the system off of the boundary, even if the system occupies a state other than $pAO = pBO = 0$ and even if $e > 0$. However, the set of states for which $pAA = pAB$ and $pBA = pBB$ or $pAA = pBB$ and $pAB = pBA$ is an infinitely small proportion of all states in the system. Therefore, the sets of initial circumstances from which a system does not move toward a state of consensual status belief are extremely rare. From all other initial conditions, a system will move ever closer to a state of consensual status belief.

way and Balkwell 1997), some preexisting status characteristic (Berger and Fişek 2006), some other goal object (Webster and Hysom 1998), or some status-relevant quantitative characteristic (Jasso 2001). All except Jasso's explanation also required a correlation across individuals between the nominal characteristic and the above-noted exogenously status-relevant dimension of individual difference (Ridgeway 1991; Ridgeway and Balkwell 1997; Webster and Hysom 1998).[20] Our explanation for the emergence of consensual status beliefs requires neither of these conditions. Our model includes no dimension of exogenous status-relevant individual difference. In our model, individuals can vary only with respect to two variables—a nominal characteristic and status belief about that nominal characteristic; yet consensual status beliefs about the nominal characteristic still emerge in almost all instances.

Status Differences between Categories of People Can Be Arbitrary

Another insight provided by our analysis is that status construction theory is sufficient to explain the emergence of an *arbitrary* status difference between categories of people. This feature of our analysis distinguishes it from earlier work (Ridgeway 1991; Ridgeway and Balkwell 1997; Webster and Hysom 1998; Jasso 2001). According to earlier presentations of status construction theory as well as Jasso's framework, if conditions made possible the emergence of consensual status beliefs, these conditions also determined which category of people would become high status and which category would become low status. The status differences explained were not arbitrary but were determined by real differences across individuals in resources, competence, attractiveness, or some other status-relevant factor that made the status differences to be explained and their direction natural and inevitable. Our analysis shows that the arguments of status construction theory can explain the emergence of completely arbitrary status differences between categories of people as well as the emergence of nonarbitrary status differences. There are conditions that make the emergence of a status difference between categories of people a certainty that do not make either category more likely than the other to become the high-status category.

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[20] Although, according to Jasso's (2001) explanation, a correlation between the nominal characteristic and the exogenously status-relevant variable is not necessary for the nominal characteristic to acquire status value, a difference between categories in average first-order status, which is a positive logarithmic function of an individual's rank position with respect to the exogenously status-relevant variable, is.

What Is the "Engine" of Status Construction?

Ridgeway (1991, pp. 378–79) described social interactional dyads composed of individuals who differed from each other with respect to the nominal characteristic and some resource that was correlated with the nominal characteristic—that is, "double dissimilar encounters"—as an "engine" that continually "pumped" the status belief favoring the resource-advantaged category of people into the system. Our analysis suggests that the combined processes of status belief diffusion and status belief loss are the feature of status construction theory that is more appropriately labeled the "engine." Given that we do not assume resource differences or other status-relevant differences among individuals, double dissimilar encounters are not the engine responsible for the tendency toward consensual status beliefs in our model. Likewise, status belief generation cannot be the engine. When $e = 0$ (and there is thus no status belief generation), the states of consensual status beliefs are still the model's only attractors. The only mechanisms remaining that could be responsible for our model's tendency toward consensual status beliefs are status belief diffusion and status belief loss.

Why Is There a Tendency toward Consensual Status Beliefs?

Analysis of our model shows a system-level tendency toward consensual status beliefs. One reason this result is interesting is that no feature of the model favors either of the status beliefs over the other. Yet, despite the model's "evenhandedness," it still generates homogeneity of belief. Comparing two very simple models helps us see why. These models are similar to our above model in that each posits a large system of actors. Each round, each actor is randomly paired with another actor. Actors can occupy different states (e.g., belief A, belief B), and an actor's present state combined with the state of the actor she meets can cause the actor's state to change. These models are also similar to our above model in that no feature of either model favors belief A over belief B or belief B over belief A. After describing the models and their behavior, we discuss how two features of the one that, like our status construction model, tends toward consensus correspond to mechanisms of status belief diffusion and loss. Considering these two simple models, and how they differ, can help us to understand why status belief diffusion and loss create a tendency toward consensual status beliefs.

The A's-and-B's Model

Consider a large system of actors, each of whom can occupy exactly one of two alternative states (*A* or *B*) at a moment in time. Think of these states as opposite beliefs. Each round, actors are randomly paired, and each actor is paired with exactly one other actor. When an *A* is paired with a *B*, each actor has a .5 probability of converting the other actor to her own state; that is, either the actor who is *A* becomes *B* or the actor who is *B* becomes *A*, and these events are equally likely. When an *A* meets an *A*, neither actor changes, and when a *B* meets a *B*, neither actor changes.

We are interested in the macrolevel behavior of this model and whether it tends toward consensus (on belief *A* or on belief *B*). As time passes, the system as a whole can move from one state to another, where a state of the system corresponds to a proportion of the actors in the system who are *A*. The states $pA = 0$ and $pA = 1$ are the states of consensus.

Analysis of this model reveals no tendency toward consensus.[21] Every state of the system—that is, every mix of *A*'s and *B*'s—is an equilibrium, and no state is an attractor or a repeller. The reason is that whatever the proportion of actors who are *A* is, the number of *A*'s who meet *B*'s is the same as the number of *B*'s who meet *A*'s; therefore, the expected number of *B*'s who become *A* equals the expected number of *A*'s who become *B*. Thus, whatever the mix of *A*'s and *B*'s, the proportion *A* is expected to stay the same. Given a system of finite size that is not at $pA = 0$ or $pA = 1$, the proportion *A* can increase or decrease by chance. If the proportion *A* changes, the expected behavior of the system is to stay in that new state. Thus, the proportion *A* follows a random walk between the states $pA = 0$ and $pA = 1$ that can continue indefinitely and ends only when a sufficiently long unlikely sequence of chance events moves the system into a consensus state.

The A's-B's-and-O's Model

This model is similar to the *A*'s-and-*B*'s model, but there is an additional state that an actor can occupy—*O*. At a moment in time, an actor can be *A* or *B* or *O*. In addition to thinking of *A* and *B* as opposite beliefs,

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[21] The system of difference equations that summarizes the behavior of the *A*'s-and-*B*'s model is

$$pA_{t+1} = pA_t - .5 \times pA_t \times pB_t + .5 \times pB_t \times pA_t,$$

$$pB_{t+1} = pB_t - .5 \times pB_t \times pA_t + .5 \times pA_t \times pB_t.$$

That every state is an equilibrium is revealed by simplifying the right-hand side of each equation, which gives $pA_{t+1} = pA_t$ and $pB_{t+1} = pB_t$.

as we suggested above, think of O as the state of an actor who holds no belief. As with the A's-and-B's model, each round, actors are randomly paired, and each actor is paired with exactly one other actor. In this model, when an A meets an O, the O becomes A. When a B meets an O, the O becomes B. When an A meets a B, both actors become O. When actors in the same state meet, neither actor changes state.

This model is similar to the A's-and-B's model in that neither state A nor state B is favored over the other. If the initial number of actors who are A equals the initial number of actors who are B, then the probability that the system will reach the state all-A equals the probability that the system will reach the state all-B. However, the behavior of this model differs from that of the A's-and-B's model in that the states all-A and all-B are attractors and are the only attractors.[22] Together, the basins of attraction for the all-A attractor and the all-B attractor constitute nearly the entire state space, and they are separated from each other by the line on which the number of actors who are A equals the number of actors who are B. Thus, if the numbers of A's and B's ever become unequal, the system moves ever closer to the corresponding attractor.

Why the A's-B's-and-O's Model Tends toward Consensus but the A's-and-B's Model Does Not

The reason for the difference in the behavior of the two models is that the category O is present in only one of them. There is no tendency toward the states of all-A or all-B in the A's-and-B's model because in every round, the number of A's who become B is expected to equal the number of B's who become A. The number of A's who meet B's is equal to the number of B's who meet A's, and it is only through meeting an actor different from oneself that it becomes possible for one to change state.

The reason the A's-B's-and-O's model tends toward all-A or all-B is twofold. First, because the number of A's who meet B's equals the number of B's who meet A's, A's and B's destroy each other in equal numbers. Second, A's and B's convert O's to A and B in numbers proportional to the prevalence of A and the prevalence of B, respectively. Therefore, if

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[22] The system of difference equations that summarizes the behavior of the A's-B's-and-O's model is

$$pA_{t+1} = pA_t - pA_t \times pB_t + pO_t \times pA_t,$$

$$pO_{t+1} = pO_t - pO_t \times (pA_t + pB_t) + 2 \times pA_t \times pB_t,$$

$$pB_{t+1} = pB_t - pB_t \times pA_t + pO_t \times pB_t.$$

Online app. B presents our analysis of this system of equations.

A ever becomes more (or less) prevalent than *B*, this difference in prevalence will increase until all actors are *A* (or *B*).

Why Status Belief Diffusion and Status Belief Loss Create a Tendency toward Consensual Status Beliefs

Of these two models, the *A*'s-*B*'s-and-*O*'s model is the one with behavior similar to that of our status construction model. Both the *A*'s-*B*'s-and-*O*'s model and our status construction model tend toward the states in which every actor holds belief *A* or every actor holds belief *B*. Considering the two features of the *A*'s-*B*'s-and-*O*'s model that distinguish it from the *A*'s-and-*B*'s model and cause it to tend toward the states all-*A* and all-*B* can help us to understand why our status construction model also tends toward the states in which every person holds belief *A* or every person holds belief *B*. First, in the *A*'s-*B*'s-and-*O*'s model, *A*'s who meet *B*'s and *B*'s who meet *A*'s become *O*'s; this feature corresponds to the mechanism of status belief loss. Second, in the *A*'s-*B*'s-and-*O*'s model, *O*'s who meet *A*'s become *A* and *O*'s who meet *B*'s become *B*; this feature corresponds to the mechanism of status belief diffusion.

Thus, our understanding of the *A*'s-*B*'s-and-*O*'s model provides an understanding for why the mechanisms of status belief diffusion and status belief loss together create a tendency toward consensual status beliefs: If an individual who holds no status belief can acquire a status belief by encountering an individual with that status belief and if an individual who holds a status belief can lose that belief by encountering an individual with the opposite belief, then opposite status beliefs will be lost in equal numbers (because the number of actors of one type who meet actors of another type equals the number of actors of the latter type who meet actors of the former type), but status beliefs will be acquired in numbers proportional to their own prevalence. This combination of mechanisms creates a tendency toward states of consensual status beliefs. If a status belief becomes more prevalent than its opposite,[23] its advantage in prevalence will increase until everyone holds that status belief.[24]

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[23] This is the essential logic of the tendency toward consensual status beliefs created by status belief diffusion and status belief loss. The *A*'s-*B*'s-and-*O*'s model makes this understanding for a tendency toward consensus easy to see. However, the *A*'s-*B*'s-and-*O*'s model is even simpler than the minimal status construction process we are interested in. Two features of our status construction model—the division of actors into categories defined by a nominal characteristic and the generation of status beliefs (in cases in which $e > 0$)—are not present in the *A*'s-*B*'s-and-*O*'s model. How these features complicate the logic of the tendency toward consensual status beliefs can be derived from eqq. (1a)–(1f). We derive these complications in online app. C.

[24] Our analysis leads us to an intuitive and substantively plausible understanding for

The Tendency toward Consensual Status Beliefs Is Structural

According to Ridgeway (1991), the process by which a nominal characteristic acquires status value is fundamentally structural. Ridgeway's explanation required that some resource, R, be correlated with N for N to acquire status value, but the key strength of this component of her explanation was that it did not require that R be perfectly correlated with N; a correlation of modest strength was sufficient. Thus, some resource-poor individuals (those of the resource-advantaged N category that became high status) came to have higher status than some resource-rich individuals (those of the resource-disadvantaged N category that became low status). Resource differences between these individuals did not explain their difference in status; in fact, differences between these individuals would predict the opposite status difference. What explained the differences in status between these individuals in Ridgeway's account were two features of the social structure—a macrolevel correlation between N and R and the repeated formation of small groups drawn from the larger population—combined with the microlevel arguments of status construction theory.

Our analysis seconds and adds precision to the argument that the process by which a nominal characteristic acquires status value is fundamentally structural. As noted above, the states of consensual status belief are attractors as long as $a > 0$ and $l > 0$. This means that the system-level tendency toward consensual status belief does not rest on a stronger individual proclivity to acquire than to lose status beliefs, that is, does not rest on a stronger predisposition in individuals to believe that there are differences in competence and worthiness between categories of people than there is to not believe that there are such differences. Even if actors have a low probability of acquiring a status belief when presented with information that supports that belief (e.g., $a = .01$) and have a high probability of losing a status belief when confronted with contrary evidence

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a tendency toward consensual status beliefs. This fact increases our confidence that the behavior of our status construction model and of the A's-B's-and-O's model is a good reflection of the logical implications of the theoretical arguments we sought to capture in constructing these models and is not dependent on particular simplifying assumptions that are not substantively meaningful. Nevertheless, several features of our status construction model could have been specified in a variety of alternative ways. We have conducted additional analyses to examine the sensitivity of our model's tendency toward consensus to relaxing several different simplifying assumptions. We find that the tendency toward consensus is robust across a variety of alternative specifications of our model. More important, our findings are consistent with our core argument that diffusion and loss together create a tendency toward consensual status beliefs because in any short period of time, opposite status beliefs tend to be lost in equal numbers while they tend to be acquired in numbers proportional to their respective prevalence. Online app. D reports these analyses.

(e.g., $l = 1$), there is still a system-level tendency toward consensual status beliefs.

Instead of having its source in an individual psychology of status characteristics, the tendency toward consensual status beliefs follows from two principles of social structure identified by Blau (1977).[25] First, if there are two categories of people, A and B, then the number of dyadic ties that connect a member of category A to a member of category B is the same as the number of dyadic ties that connect a member of category B to a member of category A.[26] This principle is why individuals tend to lose a status belief and the opposite status belief in equal numbers. Second, social contacts depend on opportunities for social contact. Therefore, the probability of contact with a member of a given out-group is a positive function of the relative size of that out-group. This is why if the number of actors holding one status belief is different from the number of actors holding the opposite belief, more actors who hold no status belief will come into contact with an actor holding the more prevalent status belief than will come into contact with an actor holding the less prevalent status belief. Thus, this principle is why more actors acquire the more prevalent of two status beliefs than the less prevalent of two status beliefs.

Will Diffusion and Loss of Any Belief or Practice Produce Consensus?

The two mechanisms on which our explanation for consensual status beliefs rests (diffusion and loss) are general; individuals acquire many beliefs and practices from other individuals, not just status beliefs, and individuals sometimes abandon these other beliefs and practices as well. Thus, given the generality of these mechanisms and our finding that these mechanisms create a tendency toward consensus, it makes sense to ask whether they will produce consensus in cases of other beliefs and practices as well. Simple extrapolation from our results would suggest that for every pair (or larger set) of alternative beliefs for which it is possible for a person to hold neither of the alternatives—that is, for which it is possible for a person to hold the neutral belief represented by O in the A's-B's-and-O's model—consensus will emerge.

Although the mechanisms of diffusion and loss operate broadly, we do

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[25] We do not deny that individuals have a strong predisposition to form status beliefs. (Experimental studies indicate a strong tendency to form status beliefs [Ridgeway et al. 1998; Ridgeway and Erickson 2000].) However, we think it is essential to realize that such an individual-level predisposition alone cannot account for the emergence of *consensual* status beliefs.

[26] Blau (1977) used this principle to derive his theorem that for any dyadic relation that occurs between members of a minority and a majority, the rate of intergroup relations will be greater for the minority than for the majority.

not expect them to produce consensus in all the cases in which they operate. Such simple extrapolation ignores the effects of other processes that may operate in cases of other types of belief and practice and may influence and complicate the system-level dynamics of those types of belief and practice. For example, earlier research suggests that for a variety of cultural beliefs and practices, such as musical tastes, processes of ecological competition (Mark 2003) and cultural distancing (Bourdieu [1979] 1984; Stark and Bainbridge 1985) produce an opposing tendency toward heterogeneity, and it is this tendency toward heterogeneity that dominates the dynamics of these cultural forms. We believe that in the case of status beliefs, the mechanisms of diffusion and loss and the tendency toward consensus they create will be distinctively powerful (or distinctively unopposed) because of the special role status beliefs play in coordinating cooperative social interaction. To the extent that other cultural beliefs play similar roles in coordinating social interaction, they too may have relatively unopposed and therefore strong tendencies toward consensus.

CONCLUSION

We have offered a new, simpler answer to the question, Why do nominal characteristics acquire status value? Together, mechanisms of status belief diffusion and status belief loss are sufficient to create a tendency toward consensual status beliefs. If interacting with a person who holds a status belief can cause a person who holds no status belief to acquire the status belief held by the other person (i.e., diffusion) and if interacting with a person who holds a status belief can cause a person who holds the opposite status belief to lose her or his belief (i.e., loss), then in any short time period, opposite beliefs will tend to be lost in equal numbers and will tend to be acquired in numbers proportional to their respective levels of prevalence. Therefore, if a status belief ever becomes more prevalent than its opposite, the more prevalent status belief is expected to increase in prevalence until every person holds it.

We do not claim that the status characteristics present in the world today were produced solely by the simple process implied by our model. We believe that many processes contribute to the formation of status characteristics; every actual status characteristic has a unique and complex history that generated it. Our model would be too simple if it were intended as an accurate description of the real-world processes that produced the status characteristics that we experience daily. However, our model is not too simple to advance our understanding of how status construction is possible or why so many unique and complex histories of status construction, one for each real-world status characteristic, all lead

to consensual beliefs that members of one category are generally more competent and worthy than members of another. A simple and general explanation for why there is a tendency toward consensual status beliefs is one essential component of a sociological understanding of status inequality.

Although our explanation for a tendency toward consensual status beliefs is simple, it has not been obvious. Explaining the emergence of consensual status beliefs has been an active area of theoretical (Ridgeway and Balkwell 1997; Webster and Hysom 1998; Jasso 2001) as well as empirical research (Ridgeway et al. 1998; Ridgeway and Erickson 2000; Ridgeway et al. 2009) since Ridgeway's (1991) initial formulation of status construction theory. Yet, the fact that mechanisms of status belief diffusion and status belief loss are logically sufficient to account for a tendency toward consensual status beliefs remained unrecognized. Our demonstration of this fact suggests revision of prevailing views on status inequality in two ways. First, no individual or category-level differences with respect to an exogenously status-relevant variable are necessary to explain the emergence of a status difference. Second, the attachment of status to a nominal characteristic can be completely arbitrary. Contrary to the implication of each previously offered explanation for status differences between categories of people, we cannot use an observed status difference between categories of people to infer an underlying meaningful difference between those categories of people.

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