

**IDENTITY, SOCIAL IDENTITY, COMPARISON, AND STATUS:
FOUR THEORIES WITH A COMMON CORE**

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IDENTITY, SOCIAL IDENTITY, COMPARISON, AND STATUS: FOUR THEORIES WITH A COMMON CORE

ABSTRACT

We examine four sociobehavioral theories – identity theory, social identity theory, comparison theory, and status theory – and we find that all four share a common core of three basic elements: personal quantitative characteristics, personal qualitative characteristics, and primordial outcomes. Though all four theories retain substantial areas outside the common core, nonetheless the existence of the common core suggests new perspectives and new research directions. These include an augmented conceptualization of self and identity, a new recognition that comparison processes and status processes may be in competition with each other, the possibility of a new theoretical form, and a new research strategy combining ingredients drawn from the four separate theories. The new research strategy expands the possibilities for all four theories, considerably enlarging their scope of application and their predictive capacity. To illustrate the new research strategy, we analyze the three-way contest between orientation to self, to subgroup, and to group in a two-subgroup society, deriving many new testable predictions, for example, that the ablest individuals in a society will not make good leaders as their first loyalty is to self.

1. INTRODUCTION

Rapid progress in understanding basic sociobehavioral processes has in recent years spurred vigorous exploration of links across group processes and their theories. For example, Stryker and Burke (2000) contrast two variants of identity theory; Hogg, Terry, and White (1995) and Stets and Burke (2000) contrast identity theory and social identity theory; and they all begin assessment of the links between identity theory, social identity theory, and status theory. Similarly, Stets (2001) contrasts identity theory and justice theory; and Jasso (2002) contrasts justice theory and status theory. As all these authors, in company with many others, note, there is much to be gained in generality, parsimony, and insight by systematic articulation across theories of basic group processes.

In this paper, building on the work cited above, we examine four sociobehavioral theories – identity theory, social identity theory, comparison theory, and status theory – and, as will be seen, we find that they share a common core of three basic elements:

- personal quantitative characteristics
- personal qualitative characteristics
- primordial outcomes

Personal quantitative characteristics are those characteristics of which there can be more or less – for example, wealth, skill, competence, beauty; quantitative characteristics comprise both cardinal characteristics (like wealth) and ordinal characteristics (like beauty). Qualitative characteristics are unorderable characteristics – for example, race, ethnicity, country of residence, language, and religion – whose categories give rise to groups and subgroups. Primordial outcomes comprise a variety of ultimate or quasi-ultimate ends such as happiness, self-esteem, self-worth, and status.

All three elements play important parts in sociobehavioral processes. Quantitative and qualitative characteristics and their operation are emphasized by Blau (1974, 1977ab) and are visible in many branches of social science. The primordial outcomes are widely viewed as engines of behavior (see, for example, Berger et al. 1980; Berger et al. 1972; Goode 1978;

Hornsey and Hogg 2002; Jasso 1980; Nock and Rossi 1978; Ridgeway 2001; Zelditch 1968).

As will be seen, the three elements are linked. The primordial outcomes are associated with mechanisms which use quantitative characteristics to generate the outcomes; and qualitative characteristics provide the groups within which the primordial outcomes are generated and the subgroups that become important when quantitative characteristics and primordial outcomes differ across categories of a qualitative characteristic. The basic template, using brackets to designate the element, is: [A primordial outcome] is generated from [a quantitative characteristic] and contrasted across the categories of [a qualitative characteristic]. For example, status (a primordial outcome) may be generated from wealth (a quantitative characteristic) and contrasted across race-based subgroups (categories of a qualitative characteristic).

Each of the three basic elements comprises a set of alternative realizations, and thus we may think of the four theories as different combinations of realizations of the three elements. Of course, the four theories each highlight a different element or a distinctive realization of the same element, and this emphasis is visible in their names. Comparison theory and status theory highlight primordial outcomes, status theory highlighting status and the members of the comparison theory family highlighting one or another of the comparison outcomes, such as happiness, self-esteem, or justice. In contrast, identity theory highlights quantitative characteristics, especially role performance; and social identity theory highlights qualitative characteristics, such as race, gender, or religion. Yet all three elements are to be found, jointly, at the core of each of the four theories.

Of course, all four theories have substantial areas outside the common core and thus preserve their uniqueness – a feature depicted below by means of a diagram. Moreover, each of the four theories has a different project, as it were, and their developers might see their cores as quite different from the set of three elements highlighted in this paper. Nonetheless, the three elements are present in all three theories and are essential to the basic processes described by the theories. For example, Tajfel and Turner's (1986) classic statement of social identity theory jointly emphasizes personal quantitative characteristics and the primordial outcome of self-

esteem along with the qualitative characteristics which give rise to subgroups.

Similarities in the structure of the four theories thus suggest that much may be gained by close scrutiny of their form and operation. Indeed, it is possible that other processes – and other theories -- also share the same basic elements, thus raising the question whether a deeper process – representable by a deeper theoretical form -- is at work.

Explicit and self-conscious attentiveness to the common core substantially expands the possibilities for all four theories. Comparison theory and status theory can incorporate the imagery and special vocabulary of identity theory and social identity theory, considerably enlarging their scope of application. Identity theory and social identity theory can incorporate the mathematization of comparison theory and status theory, considerably enlarging their toolkit and enhancing their precision and a priori predictive capacity.

2. PRELIMINARIES: BRIEF OVERVIEWS OF THE FOUR THEORIES

In this section, we present brief overviews of the four theories, highlighting the ingredients which will be used in sections 3 and 4. We note at the outset, with the greatest possible emphasis, that our descriptions, partly because of their brevity and partly because of the objective of this paper – to identify the common core of elements – will omit substantial amounts of rich elaboration. To underscore that point, we will, in section 3, present a diagram which visually depicts the four theories, their region of overlap, and the substantial non-overlapping regions. Moreover, as Stets and Burke (2000:224) note with respect to identity and social identity theories, all four theories are “under active development” and thus the objective of summarizing them is a “moving target”. We encourage future work to investigate whether any of the left-out development can be incorporated, perhaps by introducing a fourth element to the general schema, or whether, instead, the four theories must be regarded as siblings with unique aspects which will not yield to further integration.

2.1. Identity Theory

Identity theory consists of a set of general ideas about self and society and two main

variant theories (Stryker and Burke 2000). Identity theory, in both variants, conceptualizes the self as a collection of identities. The identities each consist of a complex of role-related phenomena, including expectations, performance, competence, enactment, behavior, and meanings. The identities are situated in networks of relationships among actors, for example, father and daughter, or teacher and student. Each identity generates some of what is variously called self-evaluation, self-esteem, self-worth, self-efficacy, and so on.

In the variant associated with Stryker (Stryker 1968, 1980, 2001; Stryker and Serpe 1982), the identities are arranged in a salience hierarchy, such that the greater the salience, “the greater the probability of behavioral choices in accord with the expectations attached to that identity” (Stryker and Burke 2000:286). Further, an identity’s salience is itself shaped by “commitment to the role relationships requiring that identity” (Stryker and Burke 2000:286).

In the variant associated with Burke (Burke 1991; Burke and Reitzes 1991; Burke and Stets 1999), each identity is internalized, becoming a standard against which perceived self-meanings are compared; the outcome of the comparison process is “self-verification” and, depending on the sign and magnitude of the discrepancy between the identity standard and perceived self-meanings, leads both to emotion, which signals a discrepancy, and to behavior aimed at eliminating the discrepancy (Stryker and Burke 2000:288). In this way, behavior is “goal-directed”, and the individual has agency (Stryker and Burke 2000:288).¹

Both quantitative and qualitative characteristics operate in identity theory. Personal quantitative characteristics operate in two ways. First, some of the role-related phenomena at the heart of an identity – competence, skill, performance – are themselves personal quantitative characteristics. Second, though the identities are largely role-related, identity theory also accommodates the possibility that identities are based on more generalized quantitative characteristics, including both ordinal characteristics like “honesty” (Stryker and Burke

¹ The variant associated with Stryker highlights external aspects of a collection of identities, such as their relation to the social structure, while the variant associated with Burke highlights internal dynamics of a single identity (Stryker 2001:228; Stets and Burke 2002:136).

2000:293) and cardinal characteristics like income, wealth, and other material resources (Burke 1997; Stets and Burke 2000).

Personal qualitative characteristics operate in identity theory in a variety of ways – for example, when a role is based on occupation, when an identity process is investigated in a particular group, or when in a commitment process individuals label themselves as belonging to a particular group or subgroup.

Finally, as noted, each identity generates some of what is variously called self-evaluation, self-esteem, self-worth, self-efficacy, etc. (Stryker 1980, 2001; Stets and Burke 2000).

Thus, identity theory, in both its major variants, has at its core three elements: (1) personal quantitative characteristics, in the form of role-related skills, competence, performance, as well as other ordinal and cardinal characteristics such as honesty and wealth; (2) personal qualitative characteristics, such as membership in groups or networks within which identity processes occur; and (3) primordial outcomes, such as self-esteem, self-efficacy, self-verification, self-worth, and status.

Stryker and Burke (2000:291-292), building on Stets and Burke (1996) and Stets (1997), also take several steps to explicitly link identity theory to status theory. First, they observe that receiving status aids in self-verification, prompting the reciprocal according of status. Second, they note that, absent information about particular individuals' skills and competence (i.e., their identities), information about previous status allocations will be used, paralleling the status construction process proposed by Ridgeway (1991, 1997, 2001) and the depersonalization mechanism of social identity theory (Hogg et al. 1995), which impute to individuals the characteristics of their subgroups.

2.2. Social Identity Theory

Social identity theory, which here we take as encompassing the more recent development known as social categorization theory, focuses on group and intergroup processes and relations (Tajfel 1974; Tajfel and Turner 1979, 1986; Turner 1985, 1999; Turner et al. 1987). As in identity theory, the self is conceptualized as a collection of identities; however, in this case, the

identities are social identities, each associated with membership in a social category: “The basic idea is that a social category (e.g., nationality, political affiliation, sports team) into which one falls, and to which one feels one belongs, provides a definition of who one is in terms of the defining characteristics of the category – a self-definition that is a part of the self-concept” (Hogg et al. 1995:259). Each of these social identities confers self-enhancement (Hogg et al. 1995:260), contributes to self-conceptualization (Hogg et al. 1995:262), and generates self-esteem (Hogg et al. 1995:263; see also Brown 1986:551) and status (Hornsey and Hogg 2002). These social identities crucially shape a variety of further behavioral phenomena, in particular, intergroup behavior (Hogg et al. 1995; Hornsey and Hogg 2002; Ellemers et al. 2002)

Though the emphasis is on the qualitative characteristics which generate the subgroups or social categories with which social identities are associated – gender, race, religion, language, etc. – quantitative characteristics also play a part. Quantitative characteristics are the characteristics with respect to which the subgroups or categories differ. For example, Hogg et al. (1995:260) provide an example in which men and women differ on aggressiveness; and Spears et al. (1997) discuss intelligence and creativity.

When two or more categories of a qualitative characteristic differ on a quantitative characteristic, several further processes are set in motion. The first is depersonalization (Hogg et al. 1995); here an individual comes to be seen as a member of a subgroup rather than as an individual -- that is, he or she is characterized by the subgroup average rather than by his/her own magnitude of a quantitative characteristic. A man may be seen as aggressive to the same magnitude as the average for all men, even though he may actually be a Gandhi.

Closely related to depersonalization is a train of further behaviors, including the individual’s decision whether to seek to be seen as an individual or instead accept the subgroup-based characterization. There is a contest between personal identity and social identity (Brown 1986; Stets and Burke 2000; Ellemers, Spears, and Doosje 2002).

Even when the correlation between a quantitative characteristic and a qualitative characteristic is not perfect, the subgroups or categories come to be seen as disjoint, partly as a

result of a new process, termed accentuation. As Hogg et al. (1995:261) put it, “the category-accentuation process. . . highlights intergroup discontinuities.”

When two or more categories of a qualitative characteristic differ on several quantitative characteristics, each category or subgroup comes to be characterized by the representative (say, average) magnitude on each characteristic. The category’s configuration of representative magnitudes on several quantitative characteristics is known as the prototype.

There are important dynamic dimensions in social identity theory, including intertemporal change in the representative magnitudes of quantitative characteristics in subgroups as well as individuals negotiating the processes of depersonalization and self-categorization (Hogg et al. 1995:261-262).

Meanwhile, the larger group also provides a social identity, sometimes termed the superordinate-level identity (Hornsey and Hogg 2002). Accordingly, there can be a three-way contest between personal identity, subgroup-level social identity, and superordinate-level social identity (a contest to be analyzed in our illustration in section 4 below).

Thus, social identity theory, like identity theory, has at its core three elements: (1) personal quantitative characteristics, observed in subgroups and at the superordinate level; (2) personal qualitative characteristics, which give rise to the subgroups or social categories which are the explicit focus; and (3) primordial outcomes, such as self-enhancement, self-conceptualization, and self-esteem.

Hogg et al. (1995) take several steps to explicitly link social identity theory to identity theory, and below we build on their work and that of Stets and Burke (2000). They suggest, for example, the usefulness of confronting “self-categorization with social comparison processes specified by social identity theory and self-categorization with the cybernetic mechanism suggested by Burke” (Hogg et al. 1995:266). Moreover, they consider the links to status theory.

2.3. Comparison Theory

Comparison theory begins with the classic idea that humans compare their holdings of goods (levels of ordinal characteristics or amounts of cardinal characteristics) to the levels or

amounts they think just or appropriate for themselves, and thereby experience happiness, well-being, self-esteem, the sense of justice, and a variety of other outcomes.² The larger the actual holding of a good, the greater the happiness or other comparison outcome, and the larger the comparison holding (the just amount, say), the lower the happiness or other comparison outcome. Early formulations of the self-esteem, happiness, and satisfactions members of the comparison family are found in William James ([1891]1952:200), Marx ([1849]1968:84-85), and Durkheim ([1893]1964); these were followed by progressively sharper and more precise analyses in the twentieth century.³

Following developments of the late twentieth century, the basic comparison idea is now expressed mathematically:

$$Z = \theta \ln\left(\frac{A}{C}\right), \quad (1)$$

where Z denotes the comparison outcome (say, happiness or self-esteem), A denotes the actual holding of a good or bad, C denotes the comparison holding, and θ is the signature constant whose sign is positive for goods and negative for bads and whose absolute value measures the observer's expressiveness.

The comparison function has several appealing properties. First, the comparison outcome spans the full real-number line, with zero representing a neutral point, positive numbers representing positive well-being, self-esteem or happiness (or overreward, in the special case of the justice evaluation), and negative numbers representing negative well-being, self-esteem, or unhappiness (or underreward, in the justice case). Second, the function embodies the property that deficiency is felt more keenly than comparable excess, a feature of most sociobehavioral

² The term “good” is used for quantitative characteristics of which more is preferred to less, and the term “bad” for quantitative characteristics of which less is preferred to more.

³ Notable contributions include Baldwin (1899-1891), Stouffer et al. (1949), Merton and Rossi (1950), Festinger (1954), Thibaut and Kelley (1959), Merton (1957), Runciman (1961), Homans ([1961]1974), Wright (1963), Blau (1964), Hyman (1968), Lipset (1968), Sherif (1968), Zelditch (1968), and Berger, Zelditch, Anderson, and Cohen (1972). A brief history of comparison ideas is found in Jasso (1990) and a summary in Jasso (2001a).

accounts of comparison processes. Third, the function is symmetric; that is, if the actual holding A and the comparison holding C trade places, the outcome is the negative of Z . Fourth, the function is the only function which satisfies two other desirable conditions, additivity (the effect of A on Z is independent of the magnitude of C , and the effect of C on Z is independent of the magnitude of A) and scale invariance (expressing A and C in different units – say, yen instead of dollars – does not alter Z). Further detail on these properties is found in Jasso (1978, 1990).

Both quantitative and qualitative characteristics operate in comparison theory. Personal quantitative characteristics provide the holdings of goods and bads about which comparison processes are experienced. For example, happiness may be derived from beauty, or from wealth, or from bravery, or from athletic skill. Cardinal characteristics are measured in their own units, and ordinal characteristics are measured as relative ranks within a group. To illustrate, a given individual may regard skill in a musical instrument as a good and experience well-being about it; in this case, skill is an ordinal good and measured as a relative rank within a group. The same individual may regard taxes as a bad and experience a justice evaluation about it; in this case, taxes are a cardinal bad and measured in a currency.

Qualitative characteristics operate in comparison theory in two major ways. First, qualitative characteristics provide the group in which a comparison process takes place. The group in turn is used in two ways: (a) to measure relative rank when the good (or bad) is an ordinal characteristic; and (b) to measure the comparison holding when it is specified as a parameter of a distribution. Second, qualitative characteristics provide the subgroups within the main group or population.

Note that there is one case in comparison theory when a qualitative characteristic is not required – the case in which the good is cardinal and the comparison holding is a directly selected amount. For example, in the illustration above in which taxes are the subject of the comparison, if the amount of taxes thought just is a particular amount of money, no group is required; however, if the amount of taxes thought just is the mean of the tax distribution, then a group is required to provide the context for the tax distribution.

Thus, comparison theory, like identity theory and social identity theory, has at its core three elements: (1) personal quantitative characteristics, about which comparison processes are experienced; (2) personal qualitative characteristics, which provide the group within which comparison processes occur (required in every case save one) and give rise to subgroups within groups; and (3) primordial outcomes, such as happiness, well-being, and self-esteem

Like identity theory and social identity theory, comparison theory also generates several new quantities and sets in motion a train of new processes. These include: (1) a repertoire of goods and bads about which comparison processes are experienced; (2) a repertoire of comparison holdings; (3) a repertoire of groups for measuring ordinal goods and bads and, in some cases, for measuring comparison holdings of cardinal goods and bads; (4) relative importance of goods and bads; (5) the individual's comparison profile (that is, a person's time serious of comparison outcomes); (6) the cross-sectional distribution of a comparison outcome in a group; and (7) subdistributions of a comparison outcome in subgroups, together with subgroup-specific parameters of the subdistributions as well as gaps across subgroups.

These new quantities and processes, together with others which arise in justice theory, parallel quantities and processes which arise in identity theory and social identity theory. For example, the notion of relative importance of goods and bads in justice and comparison theory echoes the salience hierarchy in identity theory; and the notion of a gap between subgroups in comparison theory echoes the ingroup-outgroup differential in social identity theory.

2.4. Status Theory

In status theory, an observer, sometimes called Self, accords first-order status, denoted S_1 , to a target, sometimes called Other. S_1 is represented by positive numbers. Thus, a person receiving S_1 status of, say, 3, has substantially greater status than a person receiving S_1 of .5. S_1 status may also refer to reflexive status, that is, to the status that Self expects to receive.⁴

⁴ Contributions to status theory include Zelditch 1968; Sampson and Rossi 1975; Berger et al. 1977; Goode 1978; Nock and Rossi 1978; Sørensen 1979; Berger et al. 1980; Bose and Rossi 1983; Turner 1984, 1995; Ridgeway 1991, 1997, 2001; Ridgeway and Balkwell 1997; and Webster and Hysom 1998. See Jasso 2001b for a brief overview of the several status literatures.

The S1 status function expresses the individual's status as a function of his or her rank on a quantitative characteristic, such as beauty, intelligence, or wealth:

$$S1 = \ln\left(\frac{1}{1-\alpha}\right), \quad (2)$$

where α denotes the relative rank on the valued quantitative characteristic and the relative rank is calculated within a group defined by a qualitative characteristic. Ridgeway (1991, 1997, 2001) introduced the distinction between quantitative and qualitative characteristics into the study of status, a distinction pioneered by Blau (1974, 1977ab). Sørensen (1979) introduced the status function, applying it to occupations, and used it as an assumption in a theory of occupational status; Sørensen's function embodies properties held by Goode (1978) to be important in an individual-level status function (notably Goode's convexity condition, whereby status increases at an increasing rate with relative rank).⁵

It is evident that status theory, like identity theory, social identity theory, and comparison theory, has at its core three elements: (1) personal quantitative characteristics, which form the basis for according (or receiving) status; (2) personal qualitative characteristics, which provide the group within which status processes occur (and are required for calculating the relative ranks) and give rise to subgroups within groups; and (3) the primordial outcome, status.

Status theory, like comparison theory, also generates quantities and processes which have counterparts in identity theory and social identity theory. For example, the notion of the relative importance of goods and bads is directly applicable to the process of generating status, echoing the salience hierarchy of identity theory; and the status distribution also gives rise to subdistributions in subgroups (Ridgeway 1991, 1997, 2001; Jasso 2001b), together with social

⁵ Relative rank is represented by the open interval between zero and one. Thus, the lowest-ranking person has a relative rank which approaches zero from the right, and the highest-ranking person has a relative rank which approaches unity from the left. In small groups, relative rank is approximated by $[i/(N+1)]$, where i denotes the absolute rank in ascending order from 1 to the group size N . These approximated relative ranks have the property that the lowest and highest relative ranks are equidistant from .5 and that the distance between the lowest relative rank and zero equals the distance between the highest relative rank and 1.

distance between subgroups, paralleling social identity theory. As well, a new competition arises between characterizing a person by individual characteristics or by subgroup representative characteristics or by whole-group representative characteristics, paralleling similar processes in both identity theory and social identity theory.

3. AT THE CORE OF THE FOUR THEORIES: THREE BASIC ELEMENTS AND SOME NEW PERSPECTIVES

3.1. Three Basic Elements

The foregoing summaries of the four theories suggest that they share a common core of three elements: First, each of the four theories involves a primordial outcome – such as self-esteem, happiness, well-being, status, or the sense of justice. Second, in each of the four theories, the primordial outcome is generated with respect to personal quantitative characteristics – such as beauty, bravery, competence, or wealth. Third, in each of the four theories, personal qualitative characteristics provide both the groups within which the primordial outcomes are generated and the subgroups that become important when quantitative characteristics and primordial outcomes differ across categories of a qualitative characteristic.

To be sure, each theory emphasizes a different element or a different realization of an element. Yet none of the theories could survive without all three elements. The processes they describe require all three elements (except in the special case mentioned above in which a qualitative characteristic is not required). Of course, each theory may have a distinctive vocabulary, so that the elements and their realizations go by different names. Table 1 provides a preliminary and partial list of the terms used in the four theories, classified by the element to which they correspond. Specificity varies across the cells of the table. For example, in some cells a generic term equivalent to the general element is provided – say, goods in the cells describing quantitative characteristics in comparison theory and status theory; other cells, however, contain the term for a realization of the general element – say, role competence in the cell describing quantitative characteristics in identity theory.

– Table 1 about here –

We emphasize that the list is partial. A complete list would require inclusion of every single term used in every single article based on the four theories. Nonetheless, the table makes vivid the presence of all three elements in all four theories.

Note that the cells corresponding to qualitative characteristics distinguish between subgroups, on the one hand, and groups, on the other hand, labeling groups “1” and subgroups “2”. This is an area where terminology has not settled; for example, what we call group and subgroup correspond to what some authors call superordinate group and group, respectively.

Of course, the theories are richer than their common core. They have distinctive imageries and vocabulary, and as well they cover phenomena and processes not reducible to the common core. To visualize this richness and scope, we present in Figure 1 a diagram, similar to a Venn diagram, of the relations between the four theories. Each theory is represented by a rectangle. Each rectangle begins with a square representing the common core. The rectangles corresponding to the four theories overlap in the area of the square representing the common core. As shown, each theory is larger than the common core. Yet a common core unites them.

– Figure 1 about here –

3.2. Some New Perspectives

3.2.1. A New Conceptualization of Self and Identity

As noted above, both identity theory and social identity theory regard the self as a collection of identities. Identity theory emphasizes a quantitative characteristic at the heart of an identity, and social identity theory emphasizes a qualitative characteristic at the heart of an identity. As we have seen, however, both theories require both quantitative and qualitative characteristics in order to build an identity.

Meanwhile, work on comparison theory and the justice version of comparison theory suggests that the basic ingredients of a comparison situation are a good and a group. Each good-and-group combination generates a particular magnitude of the comparison function or the justice evaluation function, and every time either the good or the group changes, a new score is

generated.⁶ This extreme fluidity has led comparison theorists to postulate the existence of a comparison profile for each individual, with ups and downs, plateaus and precipices, etc.

It is evident that the comparison profile (or justice profile) operates in comparison theory in the same way that the self operates in identity theory and social identity theory. Both may be thought of as collections of combinations of quantitative and qualitative characteristics.

But it is also evident that such a characterization is incomplete. For the units which make up both the self of identity theory and social identity theory and the profile of comparison theory and justice theory – the identities and the comparison situations – involve a third element besides quantitative and qualitative characteristics. That third element is the primordial outcome. In comparison theory and justice theory, the primordial outcome is given, and thus the third element is implicit. In identity theory and social identity theory, recent research reflects the growing awareness of the presence of a third element and, further, of the different forms that the third element may take (Hogg et al. 1995; Stryker and Burke 2000; Stets and Burke 2000:232; Stets 2001). Because different primordial outcomes operate differently – contrast, for example, the comparison formula (1) and the status formula (2) – it is evident that the identities in the self cannot be understood without explicit identification of the associated primordial outcomes. The same combination of quantitative characteristic and qualitative characteristic will be processed quite differently – producing a different identity – depending on whether the comparison formula or the status formula is used.

Thus, a more precise characterization of the identities which make up the self will include all three elements. A beauty-classroom-status combination generates a different identity from an intelligence-classroom-status combination, and both differ from a beauty-classroom-comparison combination and an intelligence-classroom-comparison combination. And so on.

Every person, then, has a repertoire of identities, a repertoire that may itself change over

⁶ The situation is actually a bit more complicated, for, besides requiring a good and a group, a comparison process also requires a comparison standard; and every time the comparison standard changes, the comparison score changes. Moreover, the comparison situation can refer to a bad, so that its scope is more general than the good-and-group characterization.

time. Exactly as discussed in each of the four theories, fruitful research questions pertain to activation, salience, relative importance of each identity, and so on. The only difference is that now the identity is seen to explicitly include all three elements.

3.2.2. A New Perspective on Comparison and Status Processes – and Other Processes

The point of departure for most research on comparison and status processes is a single primordial outcome. For example, a justice study typically does not look beyond the world of justice; it is assumed that justice is the primordial outcome operating in the particular situation under analysis. The development in this paper, however, makes plain that primordial outcomes are in competition with each other for the actor's attention. Thus, notwithstanding the universality or pervasiveness of such primordial outcomes as happiness, self-esteem, and status, it is important to incorporate in our theories and research designs the possibility that one or another primordial outcome is chosen, that individuals differ in the extent to which each primordial outcome occupies their mind, that, indeed, lurking beneath the comparison profile or the status profile is a more fundamental profile in which comparison and status processes appear and disappear over time.

Of course, comparison processes and status processes are not the only engines of behavior. A further important research task is to identify other primordial outcomes and to propose the mathematical form of their associated mechanisms. A prime candidate is power.

3.2.3. A Deeper Theoretical Form

The foregoing discussion, combined with juxtaposition of Table 1 and Figure 1, suggests the existence of a deeper theoretical form, a form which can be succinctly described by a template, which we provide in two versions:

1. Homogeneous-Group Version. [A primordial outcome] is generated from [a quantitative characteristic] (possibly by reference to a group formed by [a qualitative characteristic]).
2. Heterogeneous-Group Version. [A primordial outcome] is generated from [a quantitative characteristic] (possibly by

reference to a group formed by [a qualitative characteristic]) and contrasted across the categories of [a qualitative characteristic].

Consistent with our earlier discussion, both versions of the template accommodate the possibility that a qualitative characteristic is not required for generating the primordial outcome.⁷ Of course, the heterogeneous-group version of the template incorporates the basic ideas of social identity theory, and qualitative characteristics play an essential part.

Use of the template facilitates a disciplined specification of the research situation, operating as a check list. In theoretical work, the researcher decides whether to model the situation by one or more primordial outcomes, by one or more quantitative characteristics, and as a homogeneous or heterogeneous group. In empirical research of the observational kind, the researcher must discern whether the situation under observation can be faithfully characterized by one or another primordial outcome, what the valued goods and bads are, what the pertinent qualitative characteristics and their categories are. In empirical research of the experimental kind, the researcher chooses the dimensions to experimentally manipulate from among a selection of primordial outcomes, quantitative characteristics, and qualitative characteristics.

The mix-and-match strategy implicit in the templates produces new advantages. Using the vocabulary and imagery of identity theory and social identity theory increases the scope of application of comparison theory and status theory. Conversely, using the mathematical functions of comparison theory and status theory enables derivation of new predictions for identity theory and social identity theory.

3.2.4. Other Features: Interaction and Context

3.2.4.1. Interaction in the Four Theories

Social interaction is endemic in human society, and thus it plays a part in almost all

⁷ As noted above, the combination of a comparison outcome and a cardinal quantitative characteristic exemplifies a combination in which, plausibly, a group or collectivity may not be required. For example, the “just income” term in a justice evaluation or the “expected wealth” term in a comparison function could be a directly selected quantity of money, independent of any group or collectivity. The actor in such a situation might say, “She deserves a salary of \$50,000,” or “I’ve always dreamed of having a million dollars.”

sociobehavioral theories, including the four discussed here. We now present a preliminary assessment of the precise part played by interaction in the common core of the theories. To do this, we begin with the idea of a hermit, a person who never engages in interaction. Such a person has a self, and the self is a collection of identities. By turn, the hermit might experience “status derived from resourcefulness in the imaginary group of all hermits,” “happiness derived from resourcefulness in the imaginary group of all humankind, with average resourcefulness as the comparison standard,” “self-esteem derived from holiness in the imaginary group of all Egyptians, with maximum holiness as the comparison standard,” “status derived from holiness in the imaginary group of all anchorites,” and so on.

Now suppose that the hermit leaves the desert (or other eremitical venue) and joins a monastery. Even in the most austere of monasteries, some time each day is spent in the company of others, and the moment there are others there is interaction, even if by sign. Two things immediately happen. The first is that the quantitative characteristics used to generate the primordial outcomes are no longer fully under the former hermit’s control; the valued goods arise in interaction, and often they must be discussed and negotiated. The second is that the group by reference to which the former hermit derived the primordial outcomes is for large periods of time no longer imaginary but given by the group around him.

The former hermit may be the most resourceful monk or the least resourceful monk, but if resourcefulness is not valued by the other monks, it will only be in solitude that he can derive primordial outcomes from resourcefulness – unless he persuades them to value resourcefulness. And it will only be in solitude that he will escape the group of monks and revert to the “all Egyptians” or “all former anchorites” imaginary groups. Moreover, common experiences of daily life will impress on the former hermit his rank on each potential valued good within this company of monks. Further, during recreation one of the monks has a habit of calling attention to origin province and native tongue, generating a sequence of subgroup structures. The hermit finds himself sometimes classed with Coptic speakers, sometimes with monks born in Upper Egypt. Finally, the abbot likes to tell the monks each month the distribution of little sins for the

previous month, for example, from two to 200; the former hermit is barraged, as it were, with potential comparison standards. Interaction surely makes life more complicated. If the former hermit is not “happier” or “more at peace” in the monastery, he may well return to the desert.

This brief example suggests the following preliminary assessment of the part played by interaction whenever there are at least two people. First, potential valued goods arise in interaction and are chosen in interaction. Second, potential groups are given by interaction. Third, which of all the qualitative characteristics capable of generating subgroups is activated depends on interaction. Fourth, interaction provides potential comparison standards.

3.2.4.2. Context in the Four Theories

All sociobehavioral theories recognize the importance of context.⁸ For example, comparison theory notices five relevant aspects of context: (1) the benefit or burden generating the primordial outcome, (2) the rewarder, (3) the observer, (4) the time period, and (5) the sociocultural context. Similar lists could be constructed for almost every theory.

There is a second kind of context, however, which arises in the four theories we are discussing, and this might more properly be termed “scale”. The processes we have described – for example, generating an identity from the combination of quantitative characteristic, qualitative characteristic, and primordial outcome – can occur at widely disparate levels of scale. For example, a person may derive status from beauty among all American women or from beauty among all freshmen in her dorm or from beauty among all girls in her homeroom or from beauty among all Hispanic girls in her high school. The group is the unit within which the primordial outcome score is calculated. Thus, in this example, the beauty relative rank will be calculated within four different groups. Moreover, in all situations involving a comparison standard based on a group (as discussed in section 3.2.3, all situations except, possibly, situations involving a comparison outcome and a cardinal characteristic), the group provides the distribution from which the comparison standard is selected.

⁸ It is no accident that the new general publication of the American Sociological Association was named “Contexts.”

Choice of group not only specifies and constrains calculation of the relative rank and of the comparison standard, it also determines the range of possible qualitative characteristics which can generate subgroups. For example, if the group is coterminous with “male”, then gender-based subgroups cannot arise. Similarly, if the group is coterminous with one ethnicity, then ethnicity-based subgroups cannot arise. Thus, as suggested in section 3.2.1, the repertoire of identities making up the self is extraordinarily rich. But now we see that, additionally, the range of social situations, too, is extraordinarily rich, for not only can there be an intelligence-classroom-status combination and an intelligence-school-status combination but also each of these permits and forbids certain qualitative characteristics operating to generate subgroups.

Thus, the referent of “group” can as easily be a nation-state as a clique, and the corresponding “subgroups” can be provinces, race-based subsets, and so on.

4. ILLUSTRATION:

STATUS AND THE CONTEST BETWEEN SELF, SUBGROUP, AND GROUP

The framework developed in this paper is general and pertains to all groups and all individuals; the imagery, vocabulary, and tools of the four theories can be used jointly to carry out theoretical and empirical analyses of the basic processes described in the theories and the vast range of sociobehavioral phenomena they touch. Of course, other factors are also at work; empirical designs must control for their operation, either statistically or via experimental design.

To illustrate the framework, we carry out a theoretical analysis of one special case, namely, the case in which (1) the primordial outcome is status, (2) group members value one quantitative characteristic, (3) the group is characterized by one binary qualitative characteristic, and (4) the quantitative characteristic and the qualitative characteristic are perfectly positively correlated. All the predictions derived below pertain to this special case. The results would differ if, say, the primordial outcome is one of the comparison outcomes (such as self-esteem or happiness), or the qualitative characteristic has more than two categories, or the valued goods number more than one. Moreover, the variety of results predicted would be even richer when the

primordial outcome is a comparison outcome, for then results differ also by the distributional form of the quantitative characteristic(s) and by the members' choices of comparison standard(s).

4.1. Framework and Model Setup

Consider a population in which status is generated by a quantitative characteristic (such as beauty or wealth).⁹ The population also can be classified into subgroups formed by the categories of a qualitative characteristic (such as race or gender). For simplicity and convenience, let the qualitative characteristic be binary, so that there are two subgroups. Now let the quantitative characteristic and the qualitative characteristic be perfectly correlated, such that the bottom person in the top subgroup has a higher magnitude of the quantitative characteristic than the top person in the bottom subgroup. Note that this situation may characterize the actual group or may instead be a psychological belief generated via the process of accentuation proposed in social identity theory (Hogg et al. 1995:261). Note also that this situation is equivalent to the consolidation in Blau (1974:632) and to the bifurcation in Ridgeway's (1996, 1997, 2001) status construction theory.

According to both social identity theory and status theory, subgroup members have access to, or may come to be characterized by, the average status of their subgroups. Of course, everyone has access to, and can be characterized by, the average status of the entire group. Accordingly, individuals can be characterized by three types of status: personal status, subgroup status, group status. Their self-identification and other behaviors will reflect the preference for one of the three types of status, a preference guided by the possibility for self-enhancement.

Recent work in social identity theory examines the contest between subgroup status and group status (Blanz et al. 1998; Mummendey et al. 1999; Hornsey and Hogg 2002); and recent work in status theory examines the contest between personal status and subgroup status (Jasso 2001b). Briefly, the social identity tradition provides theoretical rationale and empirical evidence that individuals in the bottom subgroup will prefer to identify with the entire group – a

⁹ In this illustration we use the term “population” interchangeably with the term “group”. The technical terms of the framework are “group” and “subgroup”.

phenomenon termed superordinate recategorization (Hornsey and Hogg 2002). The status work contrasts personal status and subgroup status, deriving predictions for the proportions in each subgroup that will prefer personal status or subgroup status and predicting, for example, that within each subgroup, the higher-ranking will prefer personal status and the lower-ranking will prefer subgroup status (Jasso 2001b).

Here, in this illustration, we will consider the three-way contest generated by joint consideration of both the case studied by Hornsey and Hogg (2002) and the case studied by Jasso (2001b). In effect, we are asking where personal status fits in the social-identity schema and where group status fits in the status schema.

Given that there are three types of status, there are a priori six possible preference orderings (where the symbol “ $>$ ” denotes “is preferred to”):

1. Personal status $>$ subgroup status $>$ group status
2. Personal status $>$ group status $>$ subgroup status
3. Subgroup status $>$ personal status $>$ group status
4. Subgroup status $>$ group status $>$ personal status
5. Group status $>$ personal status $>$ subgroup status
6. Group status $>$ subgroup status $>$ personal status

Of course, given that preference is guided by self-enhancement, the foregoing preference orderings could be expressed as inequalities, with the inequality sign “ $>$ ” replacing the preference symbol “ $>$ ”.

The questions we ask include: What proportions of the population can be characterized by each of the six preference orderings? and does the pattern vary by the proportions in the subgroups? In the bottom subgroup, what proportions can be characterized by each of the six preference orderings? and does the pattern vary by the proportion in the subgroup? In the top subgroup, what proportions can be characterized by each of the six preference orderings? and does the pattern vary by the proportion in the subgroup? Are some preference orderings found in only one or the other subgroup?

These questions can be answered exactly for many special cases. Here we focus on the special case of a large population, with a perfect correlation between one valued quantitative characteristic and one binary qualitative characteristic. Using the status function (in (2)), we derive a wide range of theoretical results. We refer to the proportions in the two subgroups as the “subgroup split,” written “ p - q ,” where p denotes the proportion in the bottom subgroup and q denotes the proportion in the top subgroup. The subgroup split turns out to play a useful part in this special case in which the quantitative and qualitative characteristics are perfectly correlated.

Note again that all results pertain to this special case. Other special cases would yield different results. Systematic analysis of this variation is an important research task ahead.

4.2. Number of Subsets Formed by Distinct Preference Orderings

Table 2 presents, for subgroup splits ranging from .05-.95 to .95-.05, in five-percent increments, the subgroup status in each of the two subgroups and the magnitude of personal status at the boundary between the two subgroups. The average status for the entire group is equal to 1.¹⁰ The formulas for the average status in the two subgroups, which are derived from the basic status formula in expression (2), are provided in the footnote to Table 2.

– Table 2 about here –

The information in Table 2 can be used to gain insight into the features of the preference ordering at each subgroup split. To illustrate, consider the subgroup split .25-.75 – that is, the case in which the bottom subgroup contains 25 percent of the population and the top subgroup contains 75 percent of the population.

Bottom Subgroup in the .25-.75 Subgroup Split. Looking at the row in Table 2 in which the relative size of the bottom subgroup is .25, we begin by noting that personal status in the bottom subgroup ranges from zero (the lower bound of status) to .288, the magnitude of status at the boundary between the two subgroups. Subgroup status, calculated by the formula in the

¹⁰ The result that the mean of the status distribution is 1 can be established in two ways: First, 1 is the limit, as N goes to infinity, of the arithmetic mean of status (the formula is given in the footnote to Table 3 in Jasso (2001b:103); second, 1 is the expected value of the probability distribution arising from status (see Appendix Table A in Jasso (2001b:122)).

footnote to Table 2, is equal to .137. Thus, individuals with personal status below .137 prefer subgroup status to personal status, and individuals with personal status above .137 prefer personal status to subgroup status. Meanwhile, group status is at 1, which is higher than subgroup status and higher than the personal status of the highest-status person in the bottom subgroup. Accordingly, the predicted status orderings in the bottom subgroup are:

B.1. Among persons with personal status less than .137:

group status > subgroup status > personal status

B.2. Among persons with personal status greater than .137:

group status > personal status > subgroup status

Figure 2 provides visual representation of personal, subgroup, and group status in societies with two subgroups, for four subgroup splits. Panel A depicts the case of a .25-.75 subgroup split. Personal status is represented by the upward-sloping curve (the graph of equation (2)). Group status is represented by the horizontal line at the value of 1 on status. A vertical line separates the two subgroups. Subgroup status is represented by the short horizontal lines within each subgroup.

– Figure 2 about here –

As shown in Figure 2, panel A, there are two distinct preference orderings in the bottom subgroup, and they are as described in B.1 and B.2 above. To visualize the two subsets formed by the two preference orderings, draw a vertical line at the point where personal status crosses subgroup status. In both subsets, group status is greater than either personal status or subgroup status. In the bottom subset, subgroup status exceeds personal status, and in the top subset, personal status exceeds subgroup status.

Top Subgroup in the .25-.75 Subgroup Split. In the top subgroup, personal status ranges from .288 (at the boundary between the two subgroups) to infinity. Subgroup status equals 1.288.¹¹ Thus we can identify three subsets. The leftmost subset consists of persons whose

¹¹ From the formulas for status, in equation (2), and for the average status in the top subgroup, in the footnote to Table 2, we know that subgroup status always equals one plus the

personal status is less than one; for them, the ordering will go from subgroup status to group status to personal status. The middle subset consists of persons whose personal status is greater than one but less than the subgroup status. The third subset consists of persons whose personal status exceeds subgroup status. Accordingly, the three status orderings are:

T.1. Among persons with personal status less than 1:

subgroup status > group status > personal status

T.2. Among persons with personal status between 1 and 1.288:

subgroup status > personal status > group status

T.3. Among persons with personal status greater than 1.288:

personal status > subgroup status > group status

These three subsets are visible in Figure 2, panel A. As we did with the bottom subgroup, the three subsets can be separated by drawing vertical lines and the status intersections. Note that the number of status intersections is one less than the number of distinct status orderings. In the bottom subgroup, there is a single status intersection (between subgroup status and personal status), and thus there are two subsets; however, in the top subgroup, there are two status intersections (between personal status and group status, and between personal status and subgroup status), and thus there are three subsets.

Note also that the middle subset is dwarfed by the bottom and top subsets, a point to which we return below when we examine the proportions in each subset.

Thus, in this case in which the subgroup split is .25-.75, there are five subsets, each with a distinctive status ordering. The one status ordering which does not appear in the list is personal-group-subgroup. To probe, we begin by contrasting personal status and group status.

When does personal status equal group status? Solving the status formula for the relative rank at which status equals unity, we obtain the result $[1 - 1/e]$, or approximately .632. When the subgroup split is approximately .632-.368, personal status at the boundary between the

status at the boundary between the two subgroups.

subgroups is 1. At subgroup splits in which the bottom subgroup is lower than approximately 63 percent of the population, the status orderings will be qualitatively similar to the status orderings for the .25-.75 example above. But when the subgroup split is such that the bottom subgroup contains more than 63 percent of the population, there are some differences. Specifically, while the status orderings remain qualitatively similar in the bottom subset of the bottom subgroup and the top subset of the top subgroup, they differ in the other subsets.

To explore this difference, we examine the case of a subgroup split of .75-.25. As shown in Table 2, personal status at the boundary between the two subgroups is 1.386.

Bottom Subgroup in the .75-.25 Subgroup Split. The bottom subgroup contains individuals whose personal status ranges from zero to 1.386. Subgroup status is .538. Thus, for individuals with personal status less than .538, group status is highest, followed by subgroup status, followed by personal status. Among individuals whose personal status lies between .538 and 1, group status is highest, followed by personal status, followed by subgroup status. There is a third subset, consisting of individuals whose personal status exceeds 1; for these persons, the status ordering is the personal-group-subgroup ordering that is not represented in the below-.632 subgroup splits. Accordingly, the predicted status orderings in the bottom subgroup, as shown in Figure 2, panel D, are:

B.1. Among persons with personal status less than .538:

group status > subgroup status > personal status

B.2. Among persons with personal status between .538 and 1:

group status > personal status > subgroup status

B.3. Among persons with personal status greater than 1:

personal status > group status > subgroup status

As shown in Figure 2, there are two status intersections and hence three subsets.

Top Subgroup in the .75-.25 Subgroup Split. In the top subgroup, personal status ranges from 1.386 (at the boundary between the two subgroups) to infinity. Thus, we know at once that the group status option will be in lowest place, and there are only two subsets within the top

subgroup, in contradistinction to the case in which the bottom subgroup has less than 63 percent of the population. Subgroup status equals 2.386. The bottom subset of the top subgroup contains individuals whose personal status ranges from 1.386 to 2.386, and the top subset contains individuals whose personal status ranges from 2.386 to infinity. Accordingly, the two status orderings, visible in Figure 2, panel D, are:

T.1. Among persons with personal status between 1.386 and 2.386:

subgroup status > personal status > group status

T.2. Among persons with personal status greater than 2.386:

personal status > subgroup status > group status

In this .75-.25 case -- as in all subgroup splits in which the bottom group exceeds 63 percent of the population -- the missing status ordering is the subgroup-group-personal ordering.

Figure 2 also depicts the preference-ordering structure for groups with subgroups splits of .5-.5 and .632-.368. The .25-.75 and .5-.5 splits are qualitatively similar and characteristic of all subgroup splits below approximately .632. The .75-.25 split is characteristic of all subgroup splits above approximately .632.

4.3. Social Location of Each Preference-Ordering Subset

We turn now to examine systematically the social location of the preference-ordering subsets. Using the information in Table 2, together with formulas derived from the main status formula in expression (2) for the relative ranks at which subgroup status equals personal status, we obtain the relative ranks marking the endpoints of preference-ordering subsets. Table 3 reports the preference-ordering subsets.¹²

– Table 3 about here –

To illustrate, we continue with the example of the group with a .25-.75 subgroup split. Recall that in the bottom subgroup, personal status ranges from zero to .288 and that subgroup

¹² As discussed above, the set of relative ranks is open at both zero and one. Thus, the left endpoint of the bottom subset of the bottom subgroup approaches but does not reach zero, and similarly the top subset of the top subgroup approaches but does not reach one.

status equals .137 (Table 2 and text in section 4.2 above). Table 3 now shows that the relative rank when subgroup status equals .137 is .128, so that the leftmost subset – which we already know has a preference ordering in which group status is preferred to subgroup status and subgroup status is preferred to personal status – extends from the lowest relative rank to a relative rank of approximately .128. The second preference-ordering subset extends from a relative rank of .128 to a relative rank of .25. Thus, as already known, the bottom subgroup contains only two preference-ordering subsets.

Similarly, we examine the top subgroup. The leftmost subset of the top subgroup – which we already know has a preference ordering in which subgroup status (1.288 from Table 2) is preferred to group status (which equals 1) and group status is preferred to personal status – extends from a relative rank of .25 (at which personal status equals .288) to a relative rank of .632, the point at which personal status equals group status. The middle subset of the top subgroup extends from a relative rank of .632 to a relative rank of .724, the point at which personal status equals subgroup status. Finally, the top subset of the top subgroup extends from a relative rank of .724 to the very top; this is the subset in which personal status exceeds subgroup status and subgroup status exceeds group status.

Table 3 makes vivid and quantifies some results that first became apparent as we worked through Table 2. For convenience, we list them:

1. For all subgroup splits, each preference ordering is found in only one subgroup.
2. The two preference orderings in which the group is the first choice are found only in the bottom subgroup – that is, preference for superordinate categorization is found exclusively in the bottom subgroup.
3. The two preference orderings in which the subgroup is the first choice are found only in the top subgroup.
4. The two preference orderings in which individualism is the first choice are found in the top subgroup always and in the bottom subgroup only if the bottom subgroup has more than .632 of the population.

5. In subgroup splits less than .632, the entire bottom subgroup has the group as first choice.
6. In subgroup splits above .632, not all members of the bottom subgroup prefer superordinate categorization; a top subset of the bottom subgroup prefers personal status to group status, and the group-adherents are the lowest-ranking members of the bottom subgroup.

7. In the top subgroup, the entire subgroup never has the same first choice.

8. Individualism is the first choice of the top-ranking members of the top subgroup and also of the bottom subgroup (when the bottom subgroup has more than .632 of the population).

These theoretical results – which are *ceteris paribus* testable predictions – convey the promise of using social identity theory and status theory jointly. They suggest that a simple and parsimonious set of assumptions can generate an elaborate and intricate social reality, a reality in which societies may differ greatly in the extent to which their members are self-seeking, subgroup-seeking, or group-seeking and these differences are systematically related to the relative sizes of the subgroups. For all societies, regardless of the subgroup split, the strict correspondence between preference ordering and subgroup membership is striking.

These results can be immediately applied to and tested in a wide range of situations. As an example, consider race. Suppose that the people of a given country think of themselves as members of that country; suppose further that they are of two races, that the two racial groups differ in economic advantage, and that status is generated by wealth. For the special case in which accentuation and disjuncture occur (whether or not objectively there is perfect correlation between race and wealth), these results indicate that the bottom subgroup is more committed to the group than is the top subgroup, that in the top subgroup people are committed either to the subgroup or to themselves, that the wealthiest people are committed to themselves, and that, in societies in which the bottom subgroup is larger than 63% of the population, the richest in the bottom subgroup are also committed to themselves. Note the dilemmas, to which we return later. The wealthiest, who may possess much knowledge useful for the welfare of the group as a whole, are absorbed in themselves, and the next wealthiest in the top subgroup. Similarly, those

driven by concern for the common good (e.g., whistleblowers) come from the bottom subgroup.

If the two subgroups represent gender and the subgroup split does not reach .632, these results suggest that whistleblowers will be women. From the perspective of this framework it is not surprising that in the wake of corporate scandals and possible negligence of civil servants in averting terrorist attacks, the three heroes who would emerge are women – honored by Time Magazine as Persons of the Year for 2003 and described on the cover as “The Whistleblowers” (Lacayo and Ripley 2003).

4.4. Proportions in Each Preference-Ordering Subset

Of course, as noted earlier, it is important to assess the exact proportions in each preference ordering. Using the information in Table 3, we calculate the proportions in each preference ordering. For example, the proportion in the bottom subset of the bottom subgroup is equal to the top endpoint of that subset, as reported in Table 3; the proportion in the top subset of the top subgroup is equal to one minus the left endpoint of that subset, as reported in Table 3; and the other proportions are calculated by subtracting the lower endpoint from the upper endpoint. Table 4 reports the proportions of the population found in each preference ordering.

– Table 4 about here –

There are several striking results in Table 4, which for convenience we list, continuing our enumeration of predictions:

9. It is rare for one preference ordering to attract more than half of the population. This situation occurs for two preference orderings only (group-subgroup-personal and subgroup-group-personal) and only for highly skewed subgroup splits.

10. The group-subgroup-personal preference ordering, favored by the bottom subset of the bottom subgroup, attracts more than half of the entire population in the case in which the bottom subgroup has more than 87% of the population (Table 4 indicates that this occurs between subgroup splits of .85 and .90, and mathematically we find the point at around .87).

11. The subgroup-group-personal preference ordering, favored by the bottom subset of the top subgroup, attracts more than half of the entire population in the case in which the bottom

subgroup has less than .132 of the population (Table 4 shows this occurring between subgroup splits of .10 and .15, and the point is found by subtracting .5 from .632).

12. The proportions increase/decrease monotonically with the subgroup split in some preference orderings but not in others. Those in which the proportions increase monotonically are both in the bottom subgroup – the group-subgroup-personal and the personal-group-subgroup (which occurs only when the subgroup split exceeds .632). Those in which the proportions decrease monotonically are both in the top subgroup – the subgroup-group-personal (which occurs only when the subgroup split is less than .632) and the personal-subgroup-group. The two remaining preference orderings, one in each subgroup, vary nonmonotonically, first increasing, then decreasing.

13. There are symmetries in the monotonicity behavior. The bottom subset of the bottom subgroup and the top subset of the top subgroup both have preference orderings that vary monotonically with the subgroup split, doing so over the entire range, but they vary in opposite directions. The limited-range preference orderings occur in the rightmost subset of the bottom subgroup and the leftmost subset of the top subgroup, and vary monotonically in opposite directions. The two preference orderings which vary nonmonotonically with the subgroup split both occur in the middle subsets of the two subgroups.

14. Self-seekers in the top subgroup are numerically strongest when the top subgroup has high proportions of the population. Self-seekers in the bottom subgroup are numerically strongest when the bottom subgroup has high proportions of the population.

The substantial variation in the proportions shown in Table 4 suggest that there will be large differences across societies attributable to the subgroup split. The tone of social discourse, the cultural products, the quality of inter-subgroup relations will all vary with the subgroup split.

It is also useful to examine the subgroup-specific proportions. For this purpose, we re-state the quantities in Table 4, expressing them now relative to the subgroup-specific populations. Table 5 reports these new proportions.

– Table 5 about here –

As shown in Table 5, the two subgroups have distinctive intra-subgroup:

15. The bottom subgroup is always dominated by members who put the group first.
16. The top subgroup is always dominated by members who put the subgroup first.
17. The top subgroup has a fixed percentage of approximately 37 percent who always put themselves first.
18. The self-seekers in the bottom subgroup can be numerically strong when the overall group is heavily composed of members of that subgroup.

These results can be combined to characterize the entire society. For example, when the subgroup split is fifty-fifty, all of the bottom subgroup puts the whole group first, the top 37% of the top subgroup puts themselves first, and the remaining members of the top subgroup put their subgroup first (see Figure 2).

4.5. Orientation to Self, Subgroup, or Group

Suppose that for certain behaviors and activities the important characteristic of an individual is the first choice in the preference ordering. For example, individuals can be characterized as being oriented to self, or to subgroup, or to group, based on their first choice. Table 6 reports the proportions, relative to the entire population, oriented to self, subgroup, or group, by subgroup and subgroup split.

– Table 6 about here –

Many of the results previously obtained now achieve a kind of dramatic intensity. For studying behavior in organizations of all kinds – corporations, churches, armies, nations – it is often important to assess the individual's orientation and loyalties. These results indicate that loyalty to the overall group is found only in the bottom subgroup and that loyalty to subgroup is found only in the top subgroup. Thus, whistleblowers and those totally dedicated to the commonweal will come from the bottom subgroup. Concomitantly, the bottom subgroup will experience difficulty organizing itself for inter-subgroup confrontations. Meanwhile, the loyalty to subgroup found in the top subgroup will be undermined by the self-seekers in that subgroup.

If testing bears out these *ceteris paribus* predictions, then these results may serve also as

an aid in institutional design and social engineering, an enterprise recently cogently analyzed by J. H. Turner (2001). There are obvious dilemmas. Suppose that the wealthy and the highly intelligent make the best spies. They will, however, be more loyal to themselves than to the group, and their behavior in the field may reflect a certain opportunism. The case of corporation CEOs also merits scrutiny from this vantage point; perhaps the brightest CEOs are not the best equipped to make decisions that benefit the corporation as a whole, as they may be unduly influenced by loyalty to self. Similarly, the study of nation-building may display some of these behaviors and dilemmas.

Of course, it is obvious that these results are pertinent to a wide range of applications, from economic sociology and rational choice sociology to gender relations and race relations.

4.6. Remarks about the Contest Between Self, Subgroup, and Group

This illustration began as a simple and innocuous exercise: Suppose we examine jointly the options analyzed by Hornsey and Hogg (2002) – subgroup status versus group status – and the options analyzed by Jasso (2001b) – personal status versus subgroup status. What would we find?

At an initial level, we found that Hornsey and Hogg's (2002) result that the bottom subgroup prefers group status to subgroup status is elaborated with the twist that in one special case and one subset – the top subset when the bottom subgroup has more than 63.2 percent of the population – another option, that of personal status, also attracts adherents. Concomitantly, the Jasso (2001b) result that the lower-ranking in both subgroups prefer subgroup status is elaborated with the twist that the lower-ranking in the bottom subgroup would prefer group status even more; and the result that the higher-ranking in both subgroups prefer personal status is elaborated with the new result that when the bottom subgroup contains less than 63.2 percent of the population, the higher-ranking in the bottom subgroup prefer the group option even more.

But the joint use of status theory and social identity theory also generated a wealth of new and unexpected results. The mathematical formula embedded in the status function made it possible to obtain precise predictions concerning the social location of individuals favoring each

of the six possible preference orderings and the proportions in each subset defined by the preference orderings. These results underscore the importance of the subgroup split. They also lead to new ways of characterizing groups, subgroups, and individuals. As well, they make plain the distinctive challenges faced by the two subgroups – the bottom subgroup has no one who puts the subgroup first, and the top subgroup is undermined by members who put themselves first. And the results suggest the types of persons to appoint to positions of trust – for example, when a superordinate goal is paramount, always appoint someone from the bottom subgroup, and in societies with subgroup splits greater than .632, appoint someone whose relative rank is less than .632.

These results, made possible by jointly using social identity theory and status theory, are *ceteris paribus* testable predictions. A task for future research is to design and field a suite of tests, including experiments and surveys, across a range of settings, from cliques and classrooms to corporations, armies, and large national populations.

Finally, the primordial outcome in this illustration was status. A further task ahead is to derive parallel theoretical results for the case in which the primordial outcome is a comparison outcome, together with the case in which both status and comparison processes are operating. Beyond these lie cases in which additional primordial outcomes are incorporated and the ensuing new situations analyzed.

5. CONCLUDING NOTE

In this paper we examined four sociobehavioral theories – identity theory, social identity theory, comparison theory, and status theory – and we found that all four share a common core of three basic elements: quantitative characteristics, qualitative characteristics, and primordial outcomes. Though all four theories retain substantial areas outside the common core, nonetheless the existence of the common core suggests new perspectives and new research directions. These include an augmented conceptualization of self and identity, a new recognition that comparison processes and status processes may be in competition with each other, the

possibility of a new theoretical form, and a new research strategy combining ingredients drawn from the four separate theories.

The new research strategy substantially expands the possibilities for all four theories. Comparison theory and status theory can incorporate the imagery and special vocabulary of identity theory and social identity theory, considerably enlarging their scope of application. Identity theory and social identity theory can incorporate the mathematization of comparison theory and status theory, considerably enlarging their toolkit and enhancing their precision and a priori predictive capacity.

To illustrate the new research strategy, we analyzed the three-way contest between personal status, subgroup status, and group status in a two-subgroup group, deriving predictions for the existence, social location, and relative size of subsets adhering to each of the six preference orderings. Our results underscore the importance of the subgroup split. They also lead to new ways of characterizing groups, subgroups, and individuals. As well, they make plain the distinctive challenges faced by the two subgroups – the bottom subgroup has no one who puts the subgroup first, and the top subgroup is undermined by members who put themselves first – as well as the dilemmas associated with harnessing the capabilities of “the best and the brightest” who may be prone to put their own interests ahead of the group’s. And the results further suggest the social location of individuals who put the group first, and thus the optimal social location of persons to appoint to positions of trust – for example, when a superordinate goal is paramount, the implied rule is to always appoint someone from the bottom subgroup, and in societies in which the bottom subgroup has more than 63 percent of the population, appoint someone whose relative rank is less than .63. Another implication is that whistleblowers will be disproportionately drawn from the bottom subgroup.

The tasks ahead are clear: Theoretically, the challenge is to derive predictions for more complicated cases, including cases in which two or more primordial outcomes are jointly operating. Empirically, the challenge is to design and field tests of the various predictions, in disparate settings such as school, church, and workplace.

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Table 1. Partial List of Terms Used in Four Sociobehavioral Theories for Elements in the Common Core

Elements in the Common Core	Theories			
	Identity	Social Identity	Comparison	Status
Quantitative Characteristics	resources role competence role enactment role performance	attribute characteristic dimension	goods cardinal ordinal	goods cardinal ordinal
Qualitative Characteristics	1. society 2. attribute group master status network social category	1. superordinate category/group 2. group social category subgroup	1. comparison aggregate group social aggregate 2. subgroup	1. group 2. subgroup
Primordial Outcomes	self-concept self-efficacy self-esteem self-evaluation self-meaning self-verification self-worth status	self-conceptualization self-enhancement self-esteem status	happiness justice evaluation self-esteem self-worth well-being	deference esteem honor prestige respect status

Notes: Cell entries include some of the terms used in the four theories to refer to the three elements in the common core. Cell entries corresponding to qualitative characteristics include terms referring to both characteristics and subgroups and are subdivided into terms used to refer to the group (listed under "1") and terms used to refer to the subgroups (listed under "2").

Table 2. Subgroup Status and Status at the Boundary between Two Subgroups in a Large Society

Bottom Subgroup		Top Subgroup		Status at the Boundary
Relative Size	Status = E(S1)	Relative Size	Status = E(S1)	
0.05	0.0254	0.95	1.051	0.0513
0.10	0.0518	0.90	1.105	0.105
0.15	0.0791	0.85	1.162	0.162
0.20	0.107	0.80	1.223	0.223
0.25	0.137	0.75	1.288	0.288
0.30	0.168	0.70	1.357	0.357
0.35	0.200	0.65	1.431	0.431
0.40	0.234	0.60	1.511	0.511
0.45	0.269	0.55	1.598	0.598
0.50	0.307	0.50	1.693	0.693
0.55	0.347	0.45	1.798	0.798
0.60	0.389	0.40	1.916	0.916
0.65	0.435	0.35	2.050	1.050
0.70	0.484	0.30	2.204	1.204
0.75	0.538	0.25	2.386	1.386
0.80	0.598	0.20	2.609	1.609
0.85	0.665	0.15	2.897	1.897
0.90	0.744	0.10	3.303	2.303
0.95	0.842	0.05	3.996	2.996

Notes: Average status in subgroups is based on S1 arising from a single valued characteristic or several perfectly positively associated characteristics. Formulas for calculating the average status in the two subgroups, where p denotes the proportion in the bottom subgroup, are:

$$\text{Mean of bottom subgroup: } 1 - \left(\frac{1-p}{p} \right) \ln \left(\frac{1}{1-p} \right)$$

$$\text{Mean of top subgroup: } 1 + \ln \left(\frac{1}{1-p} \right)$$

Table 3. Relative Ranks at the Endpoints of Preference Ordering Subsets in Bottom and Top Subgroups, by Subgroup Split

Subgroup Split	Bottom Subgroup			Top Subgroup		
	Group>Subgroup>Personal	Group>Personal>Subgroup	Personal>Group>Subgroup	Subgroup>Group>Personal	Subgroup>Personal>Group	Personal>Subgroup>Group
.05	0 to .0251	.0251 to .05	---	.05 to .632	.632 to .651	.651 to 1
.10	0 to .0504	.0504 to .10	---	.10 to .632	.632 to .669	.669 to 1
.15	0 to .0760	.0760 to .15	---	.15 to .632	.632 to .687	.687 to 1
.20	0 to .102	.102 to .20	---	.20 to .632	.632 to .706	.706 to 1
.25	0 to .128	.128 to .25	---	.25 to .632	.632 to .724	.724 to 1
.30	0 to .154	.154 to .30	---	.30 to .632	.632 to .742	.742 to 1
.35	0 to .181	.181 to .35	---	.35 to .632	.632 to .761	.761 to 1
.40	0 to .208	.208 to .40	---	.40 to .632	.632 to .779	.779 to 1
.45	0 to .236	.236 to .45	---	.45 to .632	.632 to .798	.798 to 1
.50	0 to .264	.264 to .50	---	.50 to .632	.632 to .816	.816 to 1
.55	0 to .293	.293 to .55	---	.55 to .632	.632 to .834	.834 to 1
.60	0 to .322	.322 to .60	---	.60 to .632	.632 to .853	.853 to 1
.632	0 to .342	.342 to .632	---	---	.632 to .865	.865 to 1
.65	0 to .353	.353 to .632	.632 to .65	---	.65 to .871	.871 to 1
.70	0 to .384	.384 to .632	.632 to .70	---	.70 to .890	.890 to 1
.75	0 to .416	.416 to .632	.632 to .75	---	.75 to .908	.908 to 1
.80	0 to .450	.450 to .632	.632 to .80	---	.80 to .926	.926 to 1
.85	0 to .486	.486 to .632	.632 to .85	---	.85 to .945	.945 to 1
.90	0 to .525	.525 to .632	.632 to .90	---	.90 to .963	.963 to 1
.95	0 to .569	.569 to .632	.632 to .95	---	.95 to .982	.982 to 1

Table 4. Proportion of the Population in Each Preference Ordering, by Subgroup and Subgroup Split

Subgroup Split	Bottom Subgroup			Top Subgroup		
	Group>Subgroup>Personal	Group>Personal>Subgroup	Personal>Group>Subgroup	Subgroup>Group>Personal	Subgroup>Personal>Group	Personal>Subgroup>Group
.05	.0251	.0249	0	.582	.0184	.349
.10	.0504	.0496	0	.532	.0368	.331
.15	.0760	.0740	0	.482	.0552	.313
.20	.102	.0981	0	.432	.0736	.294
.25	.128	.122	0	.382	.0920	.276
.30	.154	.146	0	.332	.110	.258
.35	.181	.169	0	.282	.129	.239
.40	.208	.192	0	.232	.147	.221
.45	.236	.214	0	.182	.166	.202
.50	.264	.236	0	.132	.184	.184
.55	.293	.257	0	.082	.202	.166
.60	.322	.278	0	.0321	.221	.147
.632	.342	.290	0	0	.233	.135
.65	.353	.280	.0179	0	.221	.129
.70	.384	.248	.0679	0	.190	.110
.75	.416	.216	.118	0	.158	.0920
.80	.450	.182	.168	0	.126	.0736
.85	.486	.146	.218	0	.0948	.0552
.90	.525	.107	.268	0	.0632	.0368
.95	.569	.028	.318	0	.0316	.0184

Table 5. Proportion of Each Subgroup in Each Preference Ordering, by Subgroup and Subgroup Split

Subgroup Split	Bottom Subgroup			Top Subgroup		
	Group>Subgroup>Personal	Group>Personal>Subgroup	Personal>Group>Subgroup	Subgroup>Group>Personal	Subgroup>Personal>Group	Personal>Subgroup>Group
.05	.502	.498	0	.613	.0194	.368
.10	.504	.496	0	.591	.0409	.368
.15	.507	.0493	0	.567	.0649	.368
.20	.509	.491	0	.540	.0920	.368
.25	.512	.488	0	.509	.0123	.368
.30	.515	.485	0	.474	.158	.368
.35	.518	.482	0	.434	.198	.368
.40	.521	.479	0	.387	.245	.368
.45	.525	.475	0	.331	.301	.368
.50	.528	.472	0	.264	.368	.368
.55	.533	.467	0	.182	.450	.368
.60	.537	.463	0	.0803	.552	.368
.632	.342	.290	0	0	.632	.368
.65	.542	.430	.0275	0	.632	.368
.70	.548	.355	.0970	0	.632	.368
.75	.555	.288	.157	0	.632	.368
.80	.562	.228	.210	0	.632	.368
.85	.572	.172	.256	0	.632	.368
.90	.583	.119	.298	0	.632	.368
.95	.599	.0661	.335	0	.632	.368

Table 6. Predictions of Status Theory for Orientation to Self, Subgroup, or Group

Subgroup Split	Oriented to Group		Oriented to Subgroup		Oriented to Self	
	Bottom Subgroup	Top Subgroup	Bottom Subgroup	Top Subgroup	Bottom Subgroup	Top Subgroup
.05	.05	0	0	.6005	0	.3495
.10	.10	0	0	.569	0	.331
.15	.15	0	0	.537	0	.313
.20	.20	0	0	.506	0	.294
.25	.25	0	0	.474	0	.276
.30	.30	0	0	.443	0	.257
.35	.35	0	0	.411	0	.239
.40	.40	0	0	.379	0	.221
.45	.45	0	0	.348	0	.202
.50	.50	0	0	.316	0	.184
.55	.55	0	0	.285	0	.165
.60	.60	0	0	.253	0	.147
.632	.632	0	0	.232	0	.136
.65	.632	0	0	.221	.0180	.129
.70	.632	0	0	.190	.0680	.110
.75	.632	0	0	.158	.118	.0920
.80	.632	0	0	.126	.168	.0736
.85	.632	0	0	.0948	.218	.0552
.90	.632	0	0	.0632	.268	.0368
.95	.632	0	0	.0316	.318	.0184

Notes: Predictions are based on status theory, incorporating Sorensen's status function, and apply to large populations with two subgroups nonoverlapping on the valued good. Classification is based on status maximization.

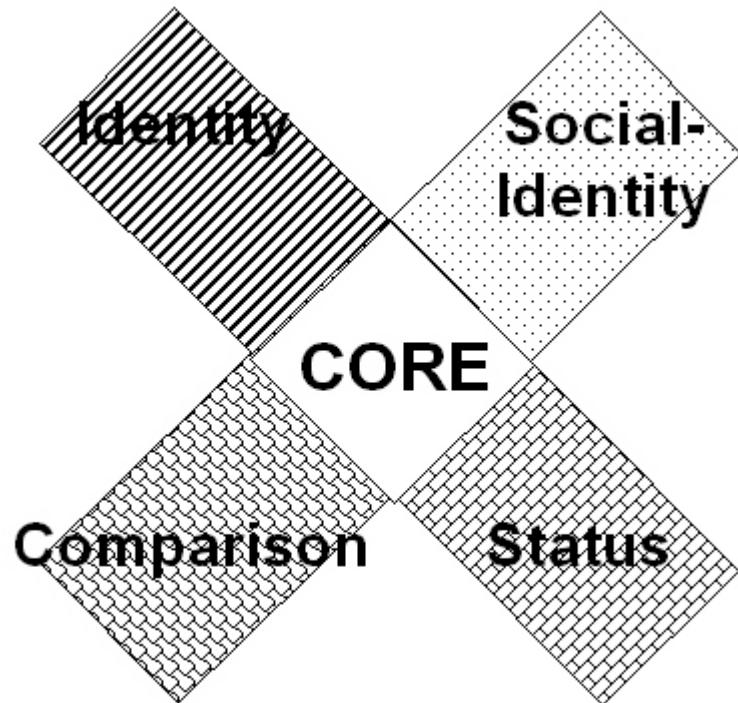
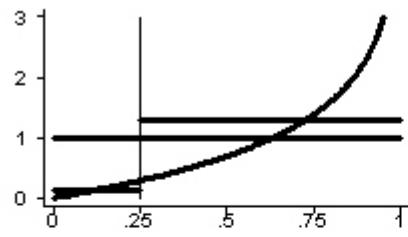
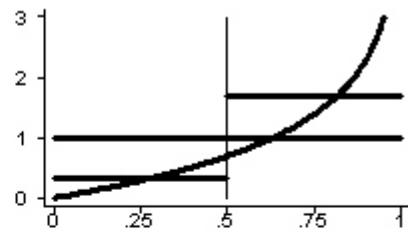


Figure 1. Four Sociobehavioral Theories with a Common Core

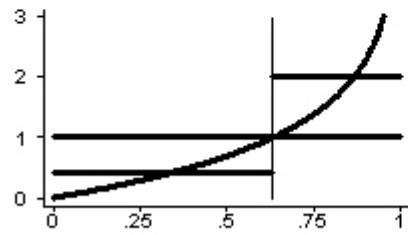
A. Subgroup split equals .25-.75.



B. Subgroup split equals .50-.50.



C. Subgroup split equals .632-.368.



D. Subgroup split equals .75-.25.

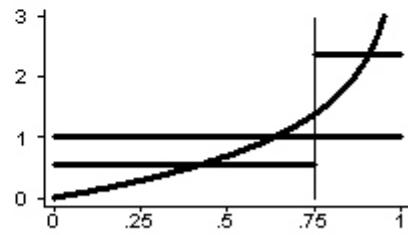


Figure 2. Personal, Subgroup, and Group Status, by Subgroup Split