

## The Direction of Ordering and its Relation to Social Phenomena\*

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### Die Richtung des Ordners und ihre Beziehung zu sozialen Phänomenen

**Inhalt:** Von zentraler Bedeutung für alle hierarchischen sozialen Phänomene sind die Prozesse, durch die Individuen einander ordnen. Der Aufsatz gibt eine Übersicht über die wichtigsten Ergebnisse von Untersuchungen dieser Ordnungsprozesse und wendet sie auf die Erklärung verschiedener sozialer Phänomene an. Zu den wichtigsten Konsequenzen des Ordners zählen der „Ordnungs-Diskriminations-Effekt“ und der „Circulus vitiosus der Machtlosigkeit“. Der Ordnungs-Diskriminations-Effekt bezeichnet die Tatsache, daß ein Individuum umso weniger Positionen auf einer Ordnungsskala unterscheidet, je niedriger seine eigene Position auf dieser Skala ist. Der Circulus vitiosus der Machtlosigkeit betrifft die Aufrechterhaltung der niedrigen sozialen Position eines Individuums als Folge des Ordnungsprozesses. Beide Effekte müssen in Theorien über typische Phänomene offener Gesellschaften – wie Anomie, Konsumverhalten, soziale Mobilität – berücksichtigt werden. Es stellt sich die Frage, wovon die Richtung des Ordners abhängt. Zur Beantwortung dieser Frage wird eine Hypothese formuliert, die experimentell überprüft wird. Die Resultate bestätigen die Hypothese, aber auch verschiedene ältere Erkenntnisse über Ordnungsprozesse.

**Abstract:** Central to all hierarchical social phenomena are the processes whereby individuals order each other. The paper summarizes the most relevant findings on ordering processes and then applies these findings to the explanation of various social phenomena. The most important direct consequences of ordering seems to be the "ordering-discrimination-effect" and the "vicious circle of powerlessness". The former refers to the phenomenon that the lower an individual is placed on an ordering, the fewer positions he/she discriminates on this ordering. The latter refers to the effect the process of ordering has on the maintenance of an individual's low social position. Both effects should be considered in theories on typical phenomena of open societies, such as anomie, consumer behavior, and social mobility. The question is raised how the ordering effects can be reversed. The attempt to answer this question leads to the formulation of a hypothesis which is tested experimentally. The results confirm the hypothesis as well as various older findings on ordering.

#### 1. Introduction

When we speak of social stratification, authority structures, status, prestige, etc., we assume among other things that individuals evaluate and rank (or "order") each other<sup>1</sup>. It is thus fair also to

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1 This assumption is quite independent of differences in approaches to social inequality, such as "objective" versus "subjective", "class" versus "status" etc. PARSONS (1954: 387) is very explicit about it: "given the process of evaluation, the probability is that it will serve to differentiate entities in a rank order of some kind." But he does not analyze these processes themselves. Even authors who stress the impact of objective class position cannot link action to class position without some assumption about *perceived* ranked differences (such as "oppressor-oppressed," "rich-poor", "progressive-conservative" etc.).

assume that these phenomena are not independent of the ways in which individuals evaluate and order each other. Yet, in sociology we find little or no examination of the processes of ordering and their relation to social phenomena.

This neglect seems to be part of a wide-spread work tradition in sociology. Slightly exaggerated and briefly stated, this tradition boils down to the belief that there are two competing ways of explanation of social phenomena: on the one hand an explanation through "individual" factors (or psychological explanation), on the other hand an explanation through "social" factors (or sociological explanation). A sociological explanation thus does not have to consider individual factors, such as cognitive processes of ordering. However, this belief is a harmful half-truth leading to wrong conclusions. Distinctions between types of explanation should not be made on the basis of "individual versus social" factors, but on the basis of propositions on individuals allowing little or no consideration of social influences (e.g. instinct theories) versus propositions on individuals allowing explicit consideration of social influences (e.g. social learning theory). Since this argumenta-

tion has been elaborated elsewhere (LINDENBERG, 1976a), it suffices at this point to state that propositions on ordering processes are likely to be relevant for sociology if they allow the explicit consideration of social influences. The present paper attempts to show just that. However, the processes of ordering in their relation to social phenomena have been so little studied that this paper will inevitably have the tinge of exploration in a relatively uncharted land: using the few roads there are, no matter how bumpy they are; adding detail where it seems most obvious; and inferring a great deal on the basis of scant information.

This paper has the following structure: it will *first* present an overview of those experimental findings on ordering which are – at least in this author's opinion – most likely to be directly relevant for sociological problems. One of these experimental findings is that, under certain circumstances, people tend to order in a particular direction (say from rich to poor, rather than from poor to rich). Harmless as this finding may appear, it promises to be rich in its consequences for the analysis of many sociological problems. And since it is impossible to follow all effects of ordering in the limited space of this paper, the directional quality of ordering is singled out. I will thus, *secondly*, discuss in an exploratory fashion the possible impact of directional ordering on various social phenomena. This exploration will leave us with the following problem: if indeed directional ordering has an important impact on a great variety of social phenomena, what determines the direction of ordering itself? Again, we do not get many leads from the literature. Therefore, *thirdly*, a hypothesis on the determinants of directional ordering will be introduced and discussed. Yet, what can we say about the likelihood that this hypothesis is correct? Here I will deviate from a standard sociological paper and present, *fourthly* and finally, an experiment designed to test the hypothesis.

## 2. Research on Ordering: An Overview

The term 'ordering' can have many different meanings. For our purpose here, it suffices to define 'ordering' (mathematically inexact) as "arrangement of elements on the basis of inequality". There is thus an intended contrast to

arrangements of elements on the basis of equality (or more precisely: equivalence). This latter form of arrangement is often called "grouping" (see LINDENBERG, 1971). For the presentation of research findings, the most important kinds of ordering are *linear orderings* and *non-linear orderings*. To make this distinction clear without going into the language of relational logic, one can present orderings as diagrams (see Figure 1).

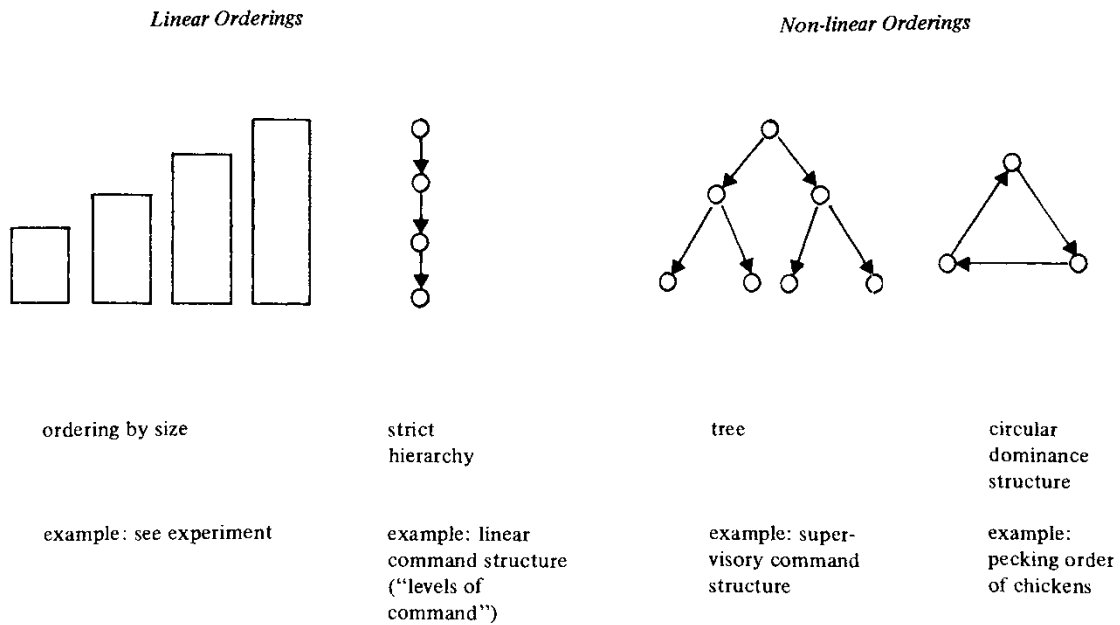
The "inequality" underlying an ordering is based on some "comparative property", that is, a property which can be assigned in different degrees to different elements. For example, "influential" is a comparative property; people can be compared with regard to this property and then be arranged on the basis of the comparison into, say, a linear ordering ("A is more influential than B, B is more influential than C, C is more influential than D, etc") or a circular dominance structure ("A is more influential than B, B is more influential than C, C is more influential than A"), as the case may be.

The first systematic studies of sociologically relevant aspects of ordering processes were made by CLINTON DESOTO and his group (see DESOTO, 1961; DESOTO and BOSLEY, 1962; KUETHE and DESOTO, 1964; DESOTO, LONDON and HANDEL, 1965). I shall here single out four particularly important findings of this group.

*First* a *linear ordering* is a preminent "good figure" in cognition; that is, people tend to organize material in linear orderings wherever possible, at the expense of non-linear orderings such as trees, circular dominance structures etc. On the basis of this finding, one would for instance predict (not without the benefit of hindsight) that tree-structures, such as organizational supervisory relations, would be preferably cognized as linear orderings of "levels" of command.

The DESOTO group also found that linear orderings are *spatially represented* in people's minds, if the comparative property underlying the ordering is evaluative (i.e. if the property is tied to a "better-worse" distinction). Part of this spatial representation is the use of spatial imagery, such as "up and down", "top, middle bottom", "above and below" etc. This finding will be especially relevant for point four below.

FIGURE 1: Some linear and non-linear orderings in diagrams



Another finding related to linear orderings is the tendency to *evaluate linear orderings positively*. The „orderliness” of linear orderings is itself pleasing. This casts some doubt on the likelihood of a society that knows of no linear orderings. It also suggests some interesting problems of ambivalence vis-a-vis totalitarian dominance structures. They are oppressive but possibly cognitively pleasing.

*Second*, people have a predilection for *single orderings*, that is, they prefer to order elements of a set by one single comparative property. For sociology, this means that people would prefer to order all other people of their society according to one dominant dimension (say, by wealth or education or progressiveness).

If more than one ordering for the same set is unavoidable, people tend to *produce or select orderings that highly intercorrelate* to form, in effect, one single ordering again. It is well known in sociology that status incongruence creates great difficulties for people. Status incongruence means precisely that relevant dimensions for ordering people do not sufficiently intercorrelate to allow one single ordering.

*Third*, people tend to *end-anchor* linear orderings. This means that the beginning and the end of a linear ordering have special importance in the cognitive representation. Beginning and end are more easily identified, learned, remembered etc. than elements in between. In addition, when the anchors are variable, they will variably influence the evaluation of elements inbetween. For example, if types of behavior are ordered from very norm-conforming to very norm-deviating and if a new behavior type is added that is far more outrageous than the most norm-deviating point in the original ordering, then the scale is expanded, and the types of behavior that were formerly placed close to the (old) end of the ordering are now shifted (relatively) closer to its beginning. Thus formerly unacceptable types of behavior can become more acceptable.

End-anchoring may thus have direct relevance for social comparison processes (by providing reference points for comparison), for the perceptual prominence of groups (by favoring identifiability of groups close to the anchors), for the evaluation and change of social norms (by affecting the relative position of norms). As will be shown later, end-anchoring has also an important inter-

active effect with the directionality of ordering, the *fourth* finding of the DESOTO group. Directionality of ordering is a phenomenon deserving very special attention because it incorporates most other ordering effects, promises to be (alone and in connection with these other effects) highly relevant for a great number of social phenomena, and it has so far received little or no attention in the sociological literature. The rest of this paper will thus be devoted to this phenomenon.

### 3. The Directionality of Ordering

The DESOTO group found (DESOTO, LONDON, and HANDEL, 1965) that evaluative linear orderings are not only represented spatially, but that the spatial representation is also traversed more easily in one direction than in another. This means that evaluative linear orderings are learned, remembered and created more easily in one direction than in another direction. It seems for instance difficult to cognitively represent elements from "worst" to "best". DESOTO et al. showed this through the use of linear syllogisms. Subjects did considerably better finding the right answer to the question: "Given A is better than B and B is better than C; is A better than C?" than finding the right answer to the question: "Given C is worse than B and B is worse than A; is C worse than A?" That the difficulty did not lie in the unusual direction of the alphabet could be seen from other questions asked by the researchers. The difficulty lay in representing an ordering from "worse" to "better".

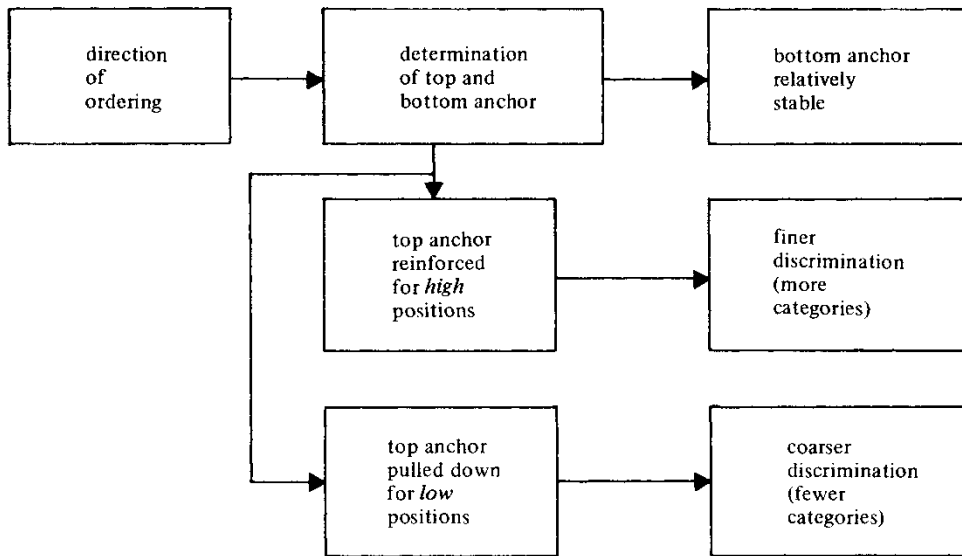
#### 3.1 *End-anchors and the Ordering-Discrimination Effect*

The direction of ordering determines which element is the top anchor (beginning) and which the bottom anchor (end) of an ordering. This is important because we have good reason to believe that top anchor and bottom anchor operate differently if, as so often occurs in the social world, people do not only order others but place themselves on the ordering. ALEXANDER (1972) found that, the closer people are themselves to the top of a status order, the greater their dispersion of judgment of others regarding status, i.e., the more extended

the scale on which they judge. That this is not solely a consequence of "objective" status position can be seen from ALEXANDER's finding that the relationship also holds for imagined and aspired status. Related to this effect is DAVIS, GARDNER and GARDNER's (1941) finding that members of lower classes distinguish fewer class categories than members of upper classes (see also LEWIS, 1964). In the language of ordering this probably means that top and bottom anchor do not operate symmetrically for persons who are part of the ordering. It seems that *the bottom anchor is stronger than the top anchor*. It can therefore be a relatively stable reference point even if one is placed far away from it. A person placed close to the top of an ordering will thus move the bottom anchor only a little away from where it is for a person placed close to the bottom anchor. The top anchor, being weaker than the bottom anchor, cannot provide a stable reference point unless it is either strengthened or pulled closer to the bottom anchor. It is the more strengthened, the closer one is placed to the top anchor because one's own position then reinforces the top anchor. The farther one is placed away from the top anchor, the less one's own position reinforces a high top anchor; thus, for persons close to the bottom anchor, the top anchor is weak and will be pulled down closer to the bottom anchor, shortening the scope of the judgment scale and thereby reducing discrimination (see VOLKMANN, 1951) and, as a consequence, also reducing information. In this way, persons placed closer to the top of an ordering will have a considerable discriminatory advantage over persons placed closer to the bottom of an ordering. But only the direction of ordering determines what is top and what is bottom anchor; it therefore also determines which anchor is weaker and which is stronger and the relationship between position and "perspective". This relationship can be called *ordering-discrimination effect*<sup>2</sup> and it is schematically summarized in figure 2.

2 For sociology, the ordering-discrimination effect may be among the most important consequences of the direction of ordering. Categorization of people will influence behavior towards them directly, and the scale of judgement may directly influence stereotyping of behavior, reduction of information and perceived alternatives to action. Yet, in order to understand properly the link between ordering and the categorization based on it, much detailed research

FIGURE 2: Ordering discrimination effect



The bottom anchor seems to be cognitively stronger than the top anchor even if a person does not place him- or herself on the ordering. KREVELD and ZAJONC (1966) and DESOTO and BOSLEY (1962) both found that the last position of a linear ordering was learned with greater ease than any of the other positions. However, both research teams also found the directional effect operative in another, even more important way. KREVELD and ZAJONC had subjects learn an influence structure. With the exception of the bottom anchor (which, as just stated, was learned with greatest ease), ease of learning decreased from the top down. Thus the top position (top anchor) was easier to learn than the second position, the second was easier to learn than the third position etc. DESOTO and BOSLEY had subjects associate labels with college classes ("senior", "junior", "sophomore", "freshman"). They also found that, with the exception of "freshman", "senior" was more easily identified than "junior", "junior", was more easily identified than "sophomore". The directional effect held for subjects of all college classes, that is, it was so strong that subjects' own class did not act as a

is needed, as can be seen from HYMAN (1942) who first applied end-anchoring to the perception of status but who also found considerable personal variations in the chosen end-anchors.

reference group (as an anchor in its own right): for instance, sophomores did not identify sophomores most easily but followed the general pattern and had the greatest difficulty identifying sophomores.

### 3.2 The Vicious Circle of Powerlessness

That directionality of ordering can be so strong that even one's own group may not function as anchor, is likely to have an impact on social strata. This can be exemplified by a (so far) hypothetical process: *the vicious circle of powerlessness*. Members of lower strata often feel powerless vis-a-vis members of upper strata. The ordering-discrimination effect reinforces this powerlessness by reducing discrimination in and information about those aspects that relate to the ordering of social positions. For example, the ordering-discrimination effect makes it unlikely that members of upper strata are in turn distinguished as to their factual differences in power, which greatly impedes successful strategic action vis-a-vis upper strata<sup>3</sup>. In addition, powerlessness

3 The ordering-discrimination effect may thus also impede the participation rate in those groups whose political ties are not formally established. ROSE (1967: 245) observes that "Very few of the great number

has a direct influence on learning. According to social learning theory (ROTTER, 1966), the actions about which one feels powerless are rarely displayed, which means that individuals receive little reaction from the environment in the area(s) in which they feel most powerless, and thus they learn least in this area(s). For instance, those aspects of upper strata (such as their communication networks and -styles, their informal distribution of relevant jobs, their educational systems, etc.) which are most relevant for the lower strata to learn to understand in order to overcome powerlessness, those aspects are in all likelihood most difficult to learn to understand for members of lower strata (see also SEEMAN, 1959, 1966, and 1967).

Yet, the direction of ordering makes it likely that members of lower strata recognize other aspects of upper strata especially well, viz. the most visible symbols of "upper class" identification (such as expensive dress and flashy possessions; see FORM and STONE, 1957; and MARTINEAU, 1958). This is so because, as we have seen above, the beginning of an ordering is more easily identified than the rest (with the exception of the very bottom, which in this case only enhances the contrast to the upper class symbols)<sup>4</sup>. In addition to their general cultural attractiveness, upper class symbols become even more attractive through the fact that, through the directionality of ordering, they are so easily identified (see also ZAJONC, 1968).

Thus, members of lower strata are likely to learn least about those aspects that are most relevant for the overcoming of powerlessness, and they

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of organizations having informal political power in our society have attracted membership from lower-income classes . . . Even the rising educational level of lower-income persons . . . have not yet resulted in appreciable increases in participation." The lack of participation in these groups does not only contribute to the maintenance of powerlessness directly, it also inhibits the diffusion of information linked to such group-participation. The ordering-discrimination effect may thus be doubly involved in keeping members of lower strata at a low information level.

4 We assume here that members of lower strata tend to order social strata from upper to lower. While it is possible that they order in the opposite direction, it is unlikely given the hypothesis about the relation of directional ordering to values – investigated and confirmed below – indeed holds.

are likely to identify and appreciate best those aspects of upper strata which not only are irrelevant for overcoming powerlessness but may also enhance the feeling of powerlessness vis-a-vis the educational system, the job distribution, communication networks etc. In this fashion, members of lower strata are, if the analysis is right, caught in a vicious circle: their social position and what they learn about upper strata enhances their powerlessness which in turn keeps them from learning to understand those aspects that are instrumental for overcoming powerlessness. Not learning to understand these instrumental aspects, in turn, keeps them in a social position which is subject to all these effects (see Figure 3).

It is not claimed that direction of ordering is the only cause initiating or maintaining this vicious circle. The length of goal-chains also has a direct influence on powerlessness (cf. LINDENBERG, 1976b), as presumably do such factors as education, laws, and mass-communication<sup>5</sup>. But the direction of ordering may well be an important – and generally overlooked – factor to be added to the sociological repertoire. This is obviously only the beginning of an exploration of the effects of directional ordering, but it opens a new and fertile field of inquiry.

### 3.3 *Anomie, Aspirations, and Open Societies*

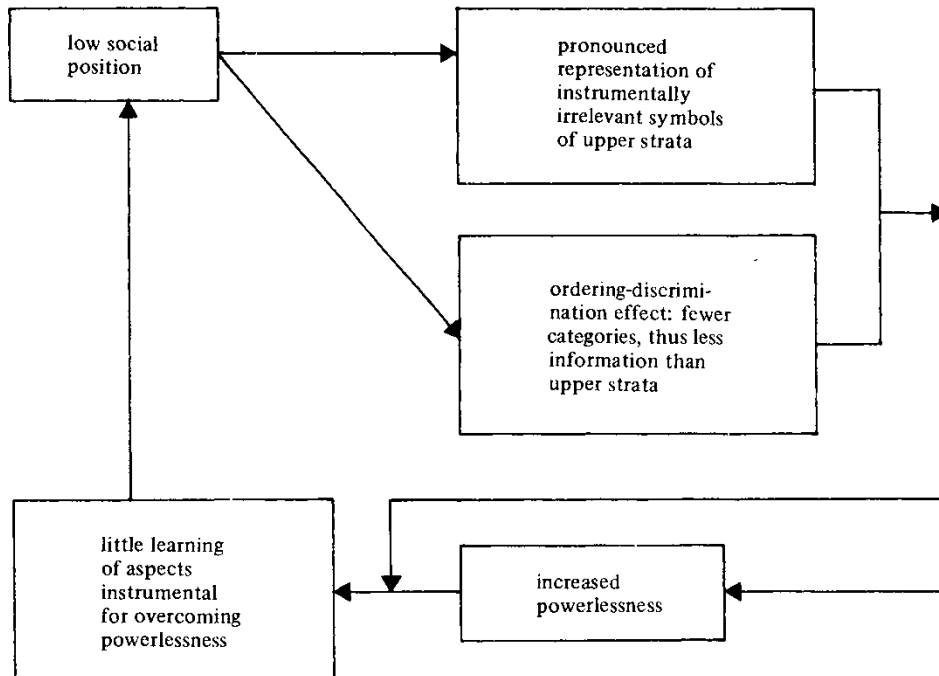
The vicious circle of powerlessness and the ordering effects involved therein can help us to clarify certain central issues of anomie theories. In his famous anomie theory, MERTON (1957) maintains that in an open society, such as America, "the greatest pressures toward deviation are exerted upon the lower strata," (p. 144) because these strata have accepted the cultural goal of success in terms of economic affluence and social ascent without having the (legitimate) means to realize this goal. Being less firmly socialized into the exclusive use of legitimate means than into the success goal itself, they forego the former in order to realize the latter; in other words, they engage at a relatively high rate in gainful deviant behavior (which MERTON calls "innovation").

There are at least two problems connected with

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5 The connection between these factors needs to be investigated independently.

FIGURE 3: The vicious circle of powerlessness



this theory. First, assuming the lower strata to be indeed more powerless with regard to a broad range of activities than upper strata, it seems implausible to expect the former to be unaffected by powerlessness when it comes to gainful deviant behavior. There are good indications that it is just the powerlessness of members of lower strata that accounts for a higher arrest record for these in comparison to upper strata, not a higher incident of gainful deviant behavior<sup>6</sup>. On the basis of the vicious circle of powerlessness, we would expect that members of lower strata are unlikely to engage in gainful deviant behavior. An explanation of such behavior for lower strata would thus have to include an account of how certain groups among these strata break out of the vicious circle of powerlessness, at least with regard to certain deviant activities<sup>7</sup>. Recourse to structured moti-

vation (such as: success-goal but no legitimate means) is no substitute for such an explanation.

Second, it is doubtful that even the structured motivation exists among lower strata as postulated by MERTON. From the ordering-discrimination effect, we would expect a lower top anchor for indicators of success among lower strata and thus also a lower level of success-aspiration. For example, if every income beyond a certain point (top anchor) is equally classified as "high" in relation to one's own income, then the level of aspired income cannot possibly lie beyond this point. Thus, the lower the top anchor, the lower the highest possible point of aspiration. Again, there is empirical evidence that this "reduced" aspiration is indeed characteristic for members of lower strata<sup>8</sup>. If a monolithic culture, in which the levels of aspiration are equally high for members of all strata, can exist at all, it certainly needs a special explanation, not provided by MERTON.

6 A great variety of studies point in this direction. For example, NYE et al., 1958; MATZA and SYKES, 1961; KITSUSE and CICOUREL, 1963; AKERS, 1964.

7 This point is in agreement with conclusions by other authors, for example CLOWARD and OHLIN (1960) or BURGESS and AKERS (1966).

8 See for example HYMAN, 1953; SEWELL et al., 1957; RUNCIMAN, 1966; and, as a cautionary note, MILLER, 1964.

Yet, is there no difference between relatively *open* societies and relatively *closed* societies? Are not cultural aspirations formulated without “class” reference in the former while they are differentially specified for different strata in the latter? This difference can be acknowledged without postulating a monolithic culture for open societies, as can be seen from the following short analysis of consumer behavior and social mobility.

In the ideal-type closed stratified society, *consumer goods* are also normatively stratified. What is available to members of upper strata is highly inappropriate or even forbidden for members of lower strata. In the ideal-type open stratified society, consumer goods are in principle available and appropriate for anyone who can pay for them. If we now assume that, due to the directionality of ordering, the most visible consumer goods of upper strata are cognitively prominent for and attractive to members of lower strata<sup>9</sup> (no matter whether the society is open or closed), then it does make a difference whether these goods are *in principle* available to lower strata, as in open societies, or not, as in closed societies. In open societies, consumer goods of upper strata can become reference points for successive approximation or, *if* the vicious circle of powerlessness can be at least partially broken, for gainful deviant behavior. This may be interpreted as a kind of anomie but it is quite different from a discrepancy between cultural goals and legitimate means on a basis of a monolithic culture. Assuming the vicious circle of powerlessness to be operative, successive approximation is a much more likely phenomenon than gainful deviant behavior in lower strata. This approximation has been called “the trickle effect” (see FALLERS, 1954; and GIST, 1974: 152ff). Progressively more inexpensive reproductions of goods associated with upper strata “trickle down” to consumers of modest means, providing “proof” that the society is open and that its attractive consumer goods are in principle available to all. Mass-production and mass-media undoubtedly aid this trickle effect but are not likely to be its causes. With regard to furniture, china and art objects, the trickle effect can be found as early as the eighteenth century for the beginning bourgeoisie (see, for example, HAUSER, 1953).

<sup>9</sup> See page 208 above, where this assumption has been introduced.

In the ideal-type closed stratified society, class divisions are not only strong but also very visible and, as with castes, often linguistically codified. In the ideal-type open stratified society, class divisions are much less definite and thus allow a great variety of different partitions. This may not greatly affect the actual rate of *social mobility*, as this rate seems to depend more on industrialization and urbanization than on the flexibility of class divisions (see LIPSET and BENDIX, 1959). But the flexibility may greatly affect the *nature* of social mobility.

It is safe to assume that most cases of *upward* mobility are accompanied by a raise in the subjective status. This means that upward mobility will bring about a change in the selfperceived place on a linear ordering. According to our hypothesis about the different operation of top and bottom anchor, upward mobility should thus also produce an ordering-discrimination effect, allowing the mobile person to make finer distinctions, gain more information and raise his/her level of aspiration. However, the ordering-discrimination effect is not independent of the rigidity/flexibility of class divisions. *The more flexible the divisions, the fewer the established constraints on discrimination and thus the stronger the ordering-discrimination effect.* For example, if there is a rather rigid division into priests, merchants, craftsmen, peasants, and outcasts, then the cognitive changes we could expect from, say, a peasant who becomes a craftsman are limited to finer distinctions *among* the priests, the merchants, and the craftsmen. We would not expect a re-partitioning that changes the rigidly established class divisions. However important new subdivisions of the existing classes may be (see MAYER, 1966), the effect is less drastic than when all lines are redrawn, as we may expect from upward mobility in an open society. From the point of view of the mobile person in an open society, the dramatic effect lies in the fact that mobility cannot be defined in terms of “stages” as in the closed society. The person cannot say: “first I was a peasant, now I am a craftsman, next I would like to become a merchant”, because the divisions are changing with each step. This means that there are also no bounds for the level of aspiration which not only is likely to rise with each step but also to be pegged to completely new divisions. Similarly, satisfaction with mobility is likely to be lower in

this situation than in closed societies. Since the ordering-discrimination effect will increase finer distinctions toward the top of the ordering more than toward the bottom of the ordering, the mobile person initially increases the number of steps "still" to be traversed, as he/she rises on the ordering, without having clear reference points (stages) to measure the "progress". For this reason we would expect that a mobile person in an open society becomes increasingly aware of what he/she has not (yet) achieved rather than contentedly observing how much "progress" he/she has made so far.

DURKHEIM (1951) described a similar situation of boundless levels of aspiration with little satisfaction about past achievements, calling it "chronic anomie": "the state of crisis and anomie is constant and, so to speak, normal. From top to bottom of the ladder, greed is aroused without knowing where to find ultimate foothold. Nothing can calm it, since its goal is far beyond all it can attain". (p.256) "*Overweening ambition always exceeds the results obtained . . . since there is no warning to pause here.* Nothing gives satisfaction and all this agitation is uninterruptedly maintained without appeasement . . . All classes contend among themselves because no established classification any longer exists". (p. 253, my emphasis)

This differs from MERTON's theory of anomie in important respects. First, DURKHEIM does not deal with a disparity between cultural goals and institutionalized means but with rising and boundless levels of aspiration. For this reason, DURKHEIM and MERTON assign different causes to anomie. The latter assumes the development of a monolithic culture, the former a decline of regulation (in terms of consumption and class-boundaries, for example) to be the cause of anomie. This comes down to two different conceptions of "open society", one in which cultural goals have diffused beyond all class-boundaries, the other in which cultural goals and class-boundaries are no longer clearly defined. Second, for DURKHEIM the primary victims of anomie are not members of lower strata, as for MERTON, but mobile members of society. Poverty and powerlessness, rather than creating anomie, dampen it in DURKHEIM's view: "the less one has the less he is tempted to extend the range of his needs indefinitely. Lack of power,

compelling moderation, accustoms men to it . . . The less limited one feels, the more intolerable all limitation appears." (p. 254). Third, DURKHEIM's theory is not subject to the objections raised against MERTON's theory (see above), and, as we have seen, DURKHEIM's assumption about the connection between lack of regulation and levels of aspiration can in turn be made more precise and can be explained with the help of theories on ordering.

In sum, three main points emerged from this analysis. First, the *vicious circle of powerlessness* makes it unlikely that lower strata engage in gainful deviant behavior. A high incident of such behavior would have to be explained with reference to demonstrated learning situations that allow certain members of lower strata to break out of the vicious circle. Second, the *ordering-discrimination effect* makes it likely that members of lower strata have relatively lower levels of aspiration. This casts doubt on the possibility that cultural goals equally diffuse throughout a stratified society. Thus, "open society" should not be defined with reference to a "monolithic culture". Third, open societies can be defined as societies in which social strata are not clearly categorized as to membership and membership-rights. As such, open societies may still have fairly distinct factual classes, but the lack of "dramatized" class-membership increases the likelihood that ordering effects strongly influence consumer behavior and the nature of social mobility. *For certain social phenomena, the impact of ordering effects is thus historically variable and, as far as present "open society" trends are concerned, on the increase.*

The described ordering effects all depend on the direction of ordering. For this reason, the question *how the direction of ordering can be reversed* becomes centrally important. For, reversing the direction of ordering will also reverse its effects. For members of lower strata, this reversal would increase information and discrimination-ability by reversing top and bottom anchor, and it would break the vicious circle of powerlessness. The remainder of this paper is thus devoted to the question: what determines the direction of ordering?

#### 4. Values and the Direction of Ordering

There is little research on when and why people order in one direction rather than in the other or in both directions. After examining indirect evidence in the literature, LINDENBERG (1971) stipulated the following hypothesis about the direction of ordering: *people tend to order towards the least preferred state*. This means that if a comparative property (i.e. a property that can hold "more or less", such as "rich") is evaluated (say, you like to be rich) then this evaluation implies a least preferred state (in this case "poor"). The direction of an ordering on the basis of this comparative property is then predicted to run from the preferred to the least preferred state (in this case from "rich" to "poor"; members of a religious order who abhor earthly goods and whose least preferred state is thus "rich" would be expected to order in the opposite direction, from "poor" to "rich"). If the property is not evaluated, no ordering direction is predicted.

The hypothesis relates direction of ordering to values which determine the least preferred state. This links ordering also to all those theories and controversies in sociology that deal with values and/or inequality, such as socialization, stratification, power and the consensus/conflict debate. For example, value consensus may be important for integration; but, given the above hypothesis is correct, *value consensus is also a source of a systematic bias in favor of the upper strata*. As elaborated earlier in this paper, the directionality of ordering makes upper strata more visible, allows them finer discriminations, renders them eminent points of comparison, and it probably underlies the vicious circle of powerlessness for lower strata, if most people order in the same direction. Yet, given value consensus, most people will order in the same direction (provided the above hypothesis is correct). Thus value consensus divides at the same time that it integrates (consider also the role the vicious circle of powerlessness can play for serious conflict; see SEEMAN, 1972). Recognition of this double-faced effect of value consensus is of course not new (see, for example, DAHRENDORF, 1959, and MERTON's anomie theory in MERTON, 1957), but the presented elaboration is different enough to throw new light on the matter, always provided, of course, that the hypothesis about the relation

between direction of ordering and values is correct. Does this hypothesis bear out?

Although there is quite an amount of indirect evidence for the hypothesis, to my knowledge no direct test has ever been reported. Considering how important the direction of ordering may be for various social phenomena, it is desirable to see the hypothesis empirically examined. Experimental tests, despite all the standard problems of representativeness, generalizability etc. connected with experiments, do allow a rather clear manipulation of conditions not easily replicable in standard sociological studies, and they are therefore a valuable beginning on which later investigations can build. The author therefore chose to test the hypothesis with an experiment, described below, which was conducted at Princeton University.

#### 5. The Experiment

##### 5.1 The basic arrangement

To repeat, the hypothesis to be tested was: "people tend to order (linearly) towards the least preferred (or least valued) state". The experiment testing this hypothesis consisted of a task in which three sets of four cards each had to be arranged. The cards showed squares of different sizes, and they could be arranged, one behind the other, from either large to small squares, or from small to large squares, or in idiosyncratic configurations ("no-orderings") such as the sequence 2-4-1-3.

Since the cards had to be arranged one after the other, it was important to test the assumptions that the arrangement begins indeed with the first card and not with the last card. Otherwise it is not possible to say whether an ordering runs from large to small or from small to large. This test was done by a recall task, to be described later.

Subjects were asked to associate the squares with particular social entities<sup>10</sup> and to associate the

<sup>10</sup> The experiment also contained sections testing two other hypotheses (to be reported on elsewhere). For this reason, subjects were also divided into groups according to the entity represented by the squares

different sizes of the squares with degrees of a comparative property (see "procedure" below). To diversify the test, two comparative properties were used: "rich" (as a static property) and "influential" (as a dynamic property), and half the subjects were assigned to the "rich" condition, the other half was assigned to the "influential" condition. Within each of these two groups, the size/property association was varied: within each group, half the subjects were told that the largest square stands for "rich" (or "influential") and the smallest square for "poor" (or "not influential"), the other half was told exactly the opposite. These conditions thus produced four different groups in a 2x2 design (see Figure 4).

were taken from OSGOOD, SUCI, and TANNENBAUM (1957), chosen for high loadings on the evaluative factor. The comparative properties were evaluated on all six scales in two "states" each ("to be rich" as well as "to be poor", and "to be influential" as well as "not to be influential"). Scale values were summed for each state of a property and compared to the sum for the opposite state of the same property. The smaller sum, indicating less positive evaluation, identified the least preferred state. On this basis, the dependent variable was defined as "tendency to order towards the least preferred state"<sup>12</sup>.

Since the task consisted of arranging squares of

FIGURE 4: Experimental conditions

		Comparative properties	
		rich	influential
Size/ property association	large positive*	group 1, called: <i>large-rich</i> condition	group 3, called: <i>large-influential</i> condition
	small positive**	group 2, called: <i>small-rich</i> condition	group 4, called: <i>small-influential</i> condition

\* "large positive" means: the larger the square, the richer (or more influential) the entity represented by the square

\*\* "small positive" means: the smaller the square, the richer (or more influential) the entity represented by the square

### 5.2 Test of the least preferred states

In order to establish the least preferred states of the comparative properties, six semantic differential scales were used (happy-sad, perfect-imperfect, full-empty, positive-negative, compatible-incompatible, interesting-boring)<sup>11</sup>. The six scales

on cards (the entities distinguished were: individual, friend, officer, professor, organization and department). Here, the orderings for all these different entities were pooled.

<sup>11</sup> It was assumed that any direct question, such as: do you like to be rich? would yield distorting answers because of a rather explicit anti-capitalistic mood among the student population in Princeton during the early Seventies. Thus a more indirect approach seemed necessary. Even so, a sizable minority of

different size, a preference regarding size may influence the result according to the very hypothesis to be tested. For instance it is conceivable that the least preferred state of the comparative

students chose "rich" as their least preferred state, as can be seen in Table 1 below. A plausible reason why this happened only in the "rich-large" condition is offered in the text below.

<sup>12</sup> The variable was operationalized as follows: if the number of orderings towards the least preferred state was larger than the number of orderings in the opposite direction, the subject was assigned a 1; if the ratio of orderings was reversed, the subject was assigned a 0; if the subject had no ordering at all, or exactly one ordering in each direction, or no preferred state, he/she was omitted from the count (see Tables 1 and 2 for the number of subjects thus omitted).

property is represented by, say, "small", while the least preferred state regarding size is "large". Although "large-small" has according to OS-GOOD et al. a very small loading on the evaluative factor and was thus expected not to influence the test, it seemed advisable to check on its possible influence. For this reason, both "large" and "small" were also evaluated on the six scales.

### 5.3 Recall task

In order to test the assumption that the arrangements actually begin with the first and not the last card, the squares on the cards were of different colors (blue, yellow, red, green; the size/color combination was randomized). At the end of the experiment, the subjects were asked to recall the colors of their three arrangements, in each case beginning with the first card and recalling in sequence. If the subjects actually arranged the cards "backward" we would expect to find many more recalls beginning with the "last" card than recalls beginning with the "first" card, and vice-versa if the subjects arranged "forward".

This recall task had an additional attraction for the experimenter by retesting the hypothesis on end-anchoring for orderings. If indeed the top and bottom are anchors, they should be better recalled than the middle positions.

### 5.4 Procedure

One hundred and forty-four undergraduate volunteers from Princeton University were randomly assigned to each of the four groups and handed a booklet. The first page contained the instructions, beginning: "This is an experiment on ways of arranging things . . ." and asking the subjects to arrange<sup>13</sup> – in the way they think most realistic – each of the three packs of cards they will find in the envelopes on the following three pages, reinsert the pack face down (to minimize additional exposure to the first card for the recall test) and seal the envelope (to make it impossible to go back to prior arrangements

13 Note that the subjects were asked to "arrange" the cards, not to "order" the cards. It was feared that the term 'order' is associated in everyday-language with 'linear order'. Thus we possibly would have biased the results using "order" instead of "arrange".

and change them or look at them for the recall test). They were then instructed that the colors of the squares were simply supposed to aid them in distinguishing the squares. Thus at the time of arranging the cards, the subjects did not know they would be asked to recall their arrangements. After that, they were told about the relation of size and property; for instance: "A small square means that – (entity x, see footnote 10) has little influence; a large square means that – has a lot of influence." They were then given the opportunity to ask the experimenter in case they had not understood their task (only two actually did ask), and requested to proceed swiftly with arranging the packs.

The colors of the squares were randomly assigned to the sizes, but each subject had three identical packs, each randomly arranged in an envelope. Above each envelope was a reminder for task and condition. The envelopes were followed by the semantic differential scales, first for the two states of the comparative properties, then for the two sizes. Order and direction of the six scales was randomized but identical for each evaluation. At the end, the subjects were asked "to recall as best you can the colors of the squares in each of the packs you arranged, in the order in which you arranged them." Spaces to fill in the colors were provided for card 1, card 2 etc. of each pack. This concluded the experiment.

### 5.5 Results

Before I report on the results about the hypothesis, two interesting byproducts of the experiment should be mentioned.

*First*, since each subject arranged three sets, 432 arrangements were produced. By chance alone, only 36 (about 8 per cent) linear orderings and 396 other arrangements would be expected. Instead, 388 linear orderings (about 90 per cent) and only 44 other arrangements were observed. Thus there was a strong *predilection for linear orderings*, supporting DESOTO's contention that the linear ordering is a preeminent good figure in cognition.

*Second*, the *predilection for single orderings* found by DESOTO was also observed. Of those subjects who had at least one ordering among their three arrangements, over 78 per cent had orderings in only one direction.

The following points pertain to the *test of the hypothesis*, beginning with a check on its presupposition:

*Third*, the recall task established that we are safe to assume that subjects ordered "forward" rather

than "backward". The recall pattern was as follows: 74 per cent of the recalled arrangements (orderings and no-orderings) began with the "first" rather than with the "last" card; only seven per cent began with the "last" card. Another way of looking at the same point: under the "forward" interpretation, the end-anchors were correctly recalled in 63 per cent of all cases; under the "backward" interpretation, end-anchors were correctly recalled in only three and one half per cent of all cases. Other relevant points about the recall task (such as end-anchoring) will be discussed below under point six.

*Fourth*, the hypothesis to be tested received strong support. Out of 131 subjects included in the count (see Tables 1 and 2 for exclusions), 100 had more linear orderings toward the least preferred state than in the opposite direction. The probability that this could have happened by chance (sign test) is negligibly small. Tables 1 and 2 give a breakdown for "rich" and "influential", respectively. Looking at the "small-rich (influential)" condition in both cases, there is little difference. We also observe a strong "positivity bias", that is, a tendency to choose the "ne-

gative" state ("poor", "not influential") as least preferred, in both cases.

The "large-rich (influential)" conditions differs for Tables 1 and 2. While the positivity bias holds equally strong for "influential", it is considerably reduced for "rich". Comparing within each table the "small" and "large" conditions, we also observe twice as many nonconforming cases in the "large" condition than in the "small" condition. A possible explanation of these differences is the following: let us assume that there are three prevalent tendencies among the subjects, viz. the tendency to order towards the least preferred state (in our sample 76 per cent), a positivity bias (81 per cent), and an habitual (?) preference to arrange things from small to large (67 per cent). These three tendencies could all be simultaneously realized in the "small-rich (influential)" conditions, while only two of them could be realized at the same time in the "large-rich (influential)" conditions. The positivity bias seems to have been more easily sacrificed in the "large-rich" condition (38 per cent) than in the "large-influential" condition (12 per cent), producing different distributions of conforming cases. The inability

TABLE 1: Ordering-direction-tendency<sup>a</sup> by Size/Property condition and Least Preferred State for comparative property "rich"

Least Preferred State	Size/Property Condition			
	small=rich <sup>b</sup>		large=rich <sup>d</sup>	
	Ordering-direction-tendency <sup>c</sup>		Ordering-direction-tendency <sup>e</sup>	
	large-small	small-large	large-small	small-large
poor	3	25	10	7
rich	5	1	1	11

<sup>a</sup> Correct predictions are encircled

<sup>b</sup> Sign test for this condition (probability of 30 correct predictions in 34 independent "trials" each of which has  $p=.5$  success):  $p<.0001$

<sup>c</sup> Excluded from count: two subjects because they had no linear ordering

<sup>d</sup> Sign test for this condition (probability of 21 correct predictions in 29 independent "trials" each of which has  $p=.5$  success):  $p<.005$

<sup>e</sup> Excluded from count: four subjects for having no linear ordering; one subject for having exactly one ordering in each direction; two subjects because they indicated no least preferred state.

TABLE 2: Ordering-direction-tendency<sup>a</sup> by Size/Property condition and Least Preferred State for comparative property "influential"

Least Preferred State	Size/Property Condition			
	small=influential <sup>b</sup>		large=influential <sup>d</sup>	
	Ordering-direction-tendency <sup>c</sup>		Ordering-direction-tendency <sup>e</sup>	
	large–small	small–large	large–small	small–large
not-influential	4	26	19	12
influential	1	2	0	4

<sup>a</sup> Correct predictions are encircled

<sup>b</sup> Sign test for this condition (probability of 27 correct predictions in 33 independent "trials" each of which has  $p=.5$  success):  $p<.0005$

<sup>c</sup> Excluded from count: two subjects for having exactly one ordering in each direction; one subject for having no least preferred state indicated.

<sup>d</sup> Sign test for this condition (probability of 23 correct predictions in 35 independent "trials" each of which has  $p=.5$  success):  $p<.05$

<sup>e</sup> Excluded from count: one subject for having exactly one ordering in each direction

to realize all three tendencies in these conditions may also have prompted a number of subjects to sacrifice ordering towards the least preferred state in favor of the small-large tendency and the positivity bias.

This interpretation is admittedly ad hoc, but it raises two interesting points. First, it admits explicitly the possibility of *other cognitive "biases"* (cf. BURNSTEIN, 1967) operating on ordering; biases that may or may not be in conflict with the tendency to order towards the least preferred state, thus either reinforcing or inhibiting that tendency. Second, it shows that if indeed these three biases were present, the tendency to order towards the least preferred state is a very strong contender when one of the biases must be sacrificed.

The *fifth* finding relates to the possible conflict between comparative property and size. It will be remembered that the least preferred states of both were ascertained in order to check whether the experimental arrangement (ordering by size) had an influence in those cases where the two least preferred states are in conflict. No difference regarding the tendency to order towards the least preferred state between those subjects with and those without such a conflict (about 77 per cent in both cases

ordered towards the least preferred state) was observed. However, the conflict showed up in other ways. For one, *the conflict did exert a pull in both directions*, even if the pull of the relational property was much stronger than that of size. While only 18 per cent of the no-conflict subjects had orderings in both directions, over 30 per cent of the conflict subjects ordered both ways. This difference is significant ( $Z = 1.65$ , one-tailed,  $p = .049$ ). Next, *the conflict – exerting a cross pressure – also inhibited ordering itself*. While less than eight per cent of all arrangements of the no-conflict subjects was not linearly ordered, over 15 per cent of the conflict subjects' arrangements was not ordered. Again, this difference is significant ( $Z = 2.44$ , one-tailed,  $p = .0073$ ).

The *sixth* finding concerns end-anchoring and recall. The analysis of errors in recall was done separately for all orderings conforming to the hypothesis, all orderings contrary to the hypothesis, and all non-linear arrangements<sup>14</sup>. Table 3 provides the matrix of mean errors for the conforming orderings. The two middle cards are almost equal in errors, and the first and last card are indeed much better recalled than the two middle cards.

<sup>14</sup> For the analysis of errors the following arrangements had to be omitted: 9 arrangements for which no least preferred state was expressed, 3 arrangements for which no recall was provided, and 3 arrangements of a subject who did not distinguish between blue and red (calling both blue; colorblind?). Together, these omissions amount to three and one half per cent of all arrangements.

TABLE 3: Mean number of errors for conforming orderings<sup>a</sup>

		Remembered Card				Total
		one	two	three	four	
Correct card	one	—	.106	.066	.062	.234
	two	.106	—	.230	.080	.416
	three	.055	.215	—	.135	.405
	four	.073	.095	.108	—	.276
Total						1.331
N=274						

<sup>a</sup> Since errors were partial or total permutations of the correct ordering, row and column margins must be identical. Small difference if any are due to rounding.

*This confirms end-anchoring for ordering.* However, compared to the margins obtained by DESOTO and BOSLEY (1962) and KREVELD and ZAJONC (1966) for paired-associates learning, the last position was not recalled best, and the last but one position was not recalled worst. A look at Table 3 shows that, contrary to the other researchers' findings, the confusion of card 3 with card 1 is smaller than the confusion of card 4 (the end-anchor) with card 1. This is an anomaly that reduces the mean error for card 3 just enough to prevent it from being the most difficult to recall. Similarly, the confusion of card 1 with card 3 is barely more than the confusion of card 1 with card 4. This anomaly makes card 1 a stronger anchor than card 4. The most painstaking re-analysis of the data did not provide an explanation for this peculiar relationship between cards 1 and 3. But aside from this anomaly, the matrix faithfully reproduces the "distance effect." That is, adjacent positions were more often confused with each other than remote positions (cells close to the diagonal have a higher entry than cells further away from the diagonal). While the distance effect is not the only cause of end-anchoring (see KREVELD and ZAJONC, 1966: 219), it could produce end-anchoring all by itself. This raises the question whether any form of arrangement in the experiment, ordered or otherwise, produced the distance effect and thereby also end-anchoring (analogous to remote associations and the serial-position effect in rote learning, see DEESE, 1958: 172ff).

Looking at Table 4, we see that this is not the case. *Where subjects did not order, they did not end-anchor;* nor did any distance effect occur. The range of errors in the margins is much smaller than in Table 3, the largest difference in errors is found for the two middle cards, and remote positions like cards 1 and 4 are more often confused than, or equal in confusion to, such adjacent positions as cards 3 and 4.

If end-anchoring occurred only for orderings, did the direction of ordering have any effect? Table 5 gives the error matrix for orderings towards the *most* preferred state. There is only one clear end-anchor (the most preferred state), and errors increase with distance from this anchor, with the exception of the first card (the least preferred state). This is almost a mirror image of the results obtained by DESOTO and BOSLEY (1962) and KREVELD and ZAJONC (1966), except for too many errors on the first card. Could it be that ordering towards the most preferred state also reverses the pattern of recall? This possibility is too important to be left unchecked.

That ordering against the preferred direction would reverse rather than simply worsen recall, contradicts DESOTO, LONDON and HANDEL's (1965) finding that an order is cognitively more difficult to represent against the preferred direction. It is thus even more surprising that the mean error for contrary orderings is lower than

TABLE 4: Mean number of errors for "no-orderings"<sup>a</sup>

		Remembered Card				Total
		one	two	three	four	
Correct card	one	—	.163	.116	.116	.395
	two	.139	—	.116	.186	.441
	three	.093	.183	—	.069	.348
	four	.163	.093	.116	—	.372
Total						1.556
N=43						

<sup>a</sup> Since errors were partial or total permutations of the correct ordering, row and column margins must be identical. Small differences if any are due to rounding.

TABLE 5: Mean number of errors for contrary orderings<sup>a</sup>

		Remembered Card				Total
		one	two	three	four	
Correct card	one	–	.19	.06	.06	.31
	two	.18	–	.13	.07	.38
	three	.06	.13	–	.11	.30
	four	.07	.06	.11	–	.24
Total						1.22
N=100						

<sup>a</sup> Since errors were partial or total permutations of the correct ordering, row and column margins must be identical. Small differences if any are due to rounding.

for conforming orderings. Either DESOTO's findings do not hold for this sample or the low mean error and the pattern of errors for the contrary orderings are spurious. There are good indications that the latter is the case.

It will be remembered that the overwhelming majority of contrary orderings came from the two conditions in which the subjects' least preferred state was "poor" or "not-influential" and they were expected to order from large to small. This situation was interpreted above as a situation of choice between ordering towards the least preferred state and following the tendency to order from small to large. Those who in this situation chose to arrange all or some of their sets of cards from small to large also therefore produced the bulk of contrary orderings. Having chosen for size, the subject may not even have thought about the comparative property when arranging the cards. If we look in Table 6 at the mean errors for these (spurious) contrary orderings and compare them to the mean errors for the (genuine) contrary orderings (those contrary orderings that run from large to small), then we see that while the latter follow the pattern for conforming orderings, the former (spurious) are solely responsible for the pattern in Table 5. It is thus possible that those who ordered just by size end-anchored but – attending mainly to size – were impressed by the larger squares and recalled their color better<sup>15</sup>. It can also be seen from Table 6 that the "genuine" contrary orderings were indeed more difficult to recall (had weaker anchors) than conforming orderings. But we can not conclude that ordering towards the most or least preferred state has any impact on the pattern of recall other than weakening the end-anchors for ordering towards the most preferred state. Yet even for these orderings, recall is still better than for "no-orderings" for which end-anchors have been completely wiped out.

<sup>15</sup> No such impression by size can be found for the contrary orderings from large-to-small (see Table 6) nor for the conforming orderings. Mean errors for the latter are as follows: small-to-large orderings (N= 178) ran .241, .426, .393, .274 for cards 1 to 4 respectively; large-to-small orderings (N= 96) ran .218, .396, .426, .281 from the first to the last card respectively. Overall mean error is thus 1.334 for the former and 1.321 for the latter.

### 5.6 Summary of the Experiment

The experiment confirmed the hypothesis that people tend to order towards the least preferred state. For example, somebody who does not like to be poor will tend to order other people (or other social entities) from rich to poor. Values can thus directly influence the direction of ordering. The importance of this influence can be gleaned from the analysis preceding the experiment.

There were also some cautionary findings. We have to reckon with the influence of other "cognitive biases" operating on ordering, such as habituated directions of ordering. These biases can reinforce or inhibit the tendency to order towards the least preferred state. Another finding was that ordering itself can be inhibited as a result of the tendency to order towards the least preferred state, viz. if the least preferred states of two simultaneous ordering dimensions are in conflict.

Results of experiments of this kind always have to be taken with some grains of salt until reliably replicated. But the confidence in the results may be strengthened by the fact that the experiment corroborated many findings by other researchers on ordering, especially the following three: the predilection for linear ordering, the predilection for single ordering, and end-anchoring.

### 6. Summary and Conclusion

This paper discussed various effects of the direction of ordering, especially the ordering-discrimi-

TABLE 6: Comparison of mean number of errors for arrangements of different kind by position of correct card in arrangement

Correct card	Spurious contrary orderings	Conforming orderings	Genuine contrary orderings	No- orderings
one	.306	.234	.316	.395
two	.354	.416	.421	.441
three	.252	.405	.394	.348
four	.177	.276	.342	.372
Total	1.089	1.331	1.473	1.556
N	62	274	38	43

nation effect and the vicious circle of powerlessness. The ordering-discrimination effect is based on the asymmetry of end-anchors and it means that the lower one is placed on a rank-order the fewer categories one is likely to distinguish on this rank-order. The vicious circle of powerlessness contributes to the maintenance of individuals in low social positions. The low position leads to powerlessness and powerlessness maintains the low position. The direction of ordering and its effects presumably play an important part in linking low social position to powerlessness.

A variety of phenomena of social stratification were analyzed with the help of these ordering effects. Against the often-made assumption that members of the lower strata engage disproportionately frequently in gainful deviant behavior, it has to be said that the vicious circle of powerlessness renders such behavior for lower strata unlikely. An explanation of gainful deviant behavior in lower strata would have to show how certain members of these strata break out of the vicious circle of powerlessness. Against the often-made assumption that cultural goals (such as "success") in an open society spread equally to all strata, it must be said that the orderings-discrimination effect renders such an equal spread unlikely. According to the ordering-discrimination effect, members of lower strata will have generally lower levels of aspiration (different or lower cultural goals) than members of higher strata. An explanation of behavior among lower strata on the basis of high levels of aspiration would have to show how the ordering-discrimination effect is overcome.

The analysis of open and closed societies showed that the impact of ordering effects is the greater the less "dramatized" social distinctions are, i.e.

the more open the society. As far as present trends are concerned, this also means that ordering effects are becoming still more important, as does the question: how can these effects be reversed?

Since the ordering effects considered are produced by the direction of ordering, the question became: how can the direction of ordering be reversed? This, in turn, led us to ask: what determines the direction of ordering? The hypothesis that values determine the direction of ordering in the sense that people tend to order towards the least preferred state, was tested and confirmed by an experiment. This procedure also showed that sociological and psychological investigations can be integrated in such a way that questions in one produce questions in the other, and answers in one produce answers in the other.

These results jointly indicate that the direction of ordering cannot easily be reversed, even where its effects are, from an ethical point of view, noxious. We have seen in the experiment that ordering towards the *most* preferred state only weakens the end-anchors. Only a change in values will effectively change the direction of ordering. NIETZSCHE already observed this in the transition from what he called master morality to slave morality, along with the difficulties attached to such a change. The predilection for single orderings will make it almost impossible to change just one value and one ordering. And the effect of others on one's own values will make it almost impossible to change a value without group support. For this reason, the direction of ordering has a conservative influence on partial change and the isolated individual, but a potentially revolutionary influence regarding whole

value systems and groups of people. For example, in recent years, many leaders of American blacks made concerted efforts to establish a "black" value system against the dominant "white middle class" value system. This may well – at least in part – be motivated by the effect of values on the direction of ordering and its consequences, such as breaking the vicious circle of powerlessness. ORUM and COHEN (1973) observe that "young black children are acquiring a more marked *disaffection* from the larger political system than their white counterparts, and *at the same time becoming more alert and informed* about politics." (p. 73, emphasis mine). Thus, ORUM and COHEN observe a change of political values (marked *disaffection* . . .) among black children and, at the same time, an increase in cognitive representation ("alert") and information regarding politics. While it is not plausible to assume that we learn more about things we value less, the effect of the directionality of ordering can explain this seeming paradox.

Many of the links between direction of ordering and other social phenomena suggested in this paper clearly need independent investigation. At this stage, they are merely informed speculation. But they are suggestive enough to enunciate an area worth investigating.

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