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## IDENTITY PROCESSES AND SOCIAL STRESS\*

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*Social stress can be understood by incorporating interruption theory as developed in research on stress into a model of identity processes drawn from identity theory. From this perspective, social stress results from interruption of the feedback loop that maintains identity processes. I discuss four mechanisms of interruption of identity processes: broken identity loops, interference between identity systems, over-controlled identity systems, and the invocation of episodic identities. Each of these four mechanisms is associated with conditions known to produce feelings of distress. Finally, I discuss how personal evaluation relates to identity processes and distress, and how distress can lead to changes in identity.*

Thirty years ago in *Identity and Anxiety*, Stein, Vidich and White (1960) expressed the concern that the advent of a mass society would lead to a "loss of identity" and hence to widespread anxiety or stress. Today, research on social stress is more likely to emphasize the excessive demands and pressures arising from the many roles and identities that people maintain (Holroyd and Lazarus 1982; House 1974). While the implicit contradiction between these contrasting themes of too few or too many identities has not yet been resolved, interest in the relationship between stress or anxiety and identity has grown.

In this paper, I propose a model of the relationship between stress and identity. I show that in a variety of situations known to produce stress, stress results from a common mechanism: disruption of the identity process. The importance of this common mechanism is two-fold. First, from the point of view of identity theory, it underlines the importance of understanding identity as a continuous process rather than as a state or trait of an individual. Second, it gives a focus to research on coping and problem solving as mechanisms for dealing with anxiety and distress. While Thoits (1991) has recently suggested that life events related to identities are more likely to produce distress than other life events, the present paper presents a model that helps to clarify this link.

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Although some researchers use the terms "stress" and "anxiety" to refer to the same phenomenon (cf., Spielberger 1976), many now prefer to use the term anxiety (or distress) to refer to the subjective feelings associated with stress. In the latter interpretation, anxiety (distress) results from stress (Endler and Edwards 1982). Stress is a relationship between external conditions and the current state of the person; and distress or anxiety is the internal, subjective response to that relationship. Throughout the paper I use "stress" and "anxiety" in this way, and I generally favor the term distress over anxiety.

### THE CONCEPT OF STRESS

Stress is often thought of as demands on individuals that tax or exceed their resources for managing them.<sup>1</sup> In contrast to the concept of stress as overload, a recent cognitive view of stress focuses on *interruption* and subsumes the idea of overload (Mandler 1982). The basic premise of interruption theory is the well-documented finding that *autonomic activity results whenever some organized action or thought process is interrupted*. Interruption is the disconfirmation of an expectancy or the noncompletion of some initiated action. The autonomic activity (distress or anxiety) instigated by interruption (stress) serves as a sig-

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<sup>1</sup> In addition, we need to separate *social* stress from *environmental* stress (noise, pollution, carcinogens, etc.). Social stress, I argue, operates through identity processes. Environmental stress operates through biological systems. Some stressors may be both environmental and social producing distress through identities as well as through other mechanisms. A holdup or a rape, for example, may threaten ones biological existence as well as one's sense of who one is.

naling system that demands attention. This can result in the adaptive response of increasing attention to crucial events or, in more extreme situations, of drawing attention away from other needed areas (Baddeley 1972).

The difference between overload and interruption is documented by Kirmeyer (1988). She studied police radio dispatchers whose completion of particular tasks on the job is frequently interrupted as new calls come in. She showed that the amount of distress dispatchers experience is directly related to the number of objective interruptions that occur per hour. The total work load (number of all tasks per hour), while correlated with distress, appears to affect distress levels entirely through the *rate of interruptions* that occur. This view of distress as the result of interruption has also been fruitfully applied by Berscheid (1983) in her study of emotional arousal. She pointed to a number of studies that demonstrated (a) the attention-getting properties of interruption, (b) the arousal that follows interruption, and (c) the analysis and interpretation of the meaning of the interrupting event which helps individuals understand which "emotion" they are experiencing and what they can do about it. She showed, for example, with respect to romantic love, that interruptive obstacles seem to act to heighten passion (arousal) rather than decrease it.

The degree of autonomic activity caused by the interruption of organized processes depends both on the *degree of organization* of the interrupted process and the *severity* of the interruption (Mandler 1982). The interruption of a highly-organized activity or cognitive process will result in a high level of autonomic activity. Also, severe interruption, that is the process of repeatedly initiating an activity in a situation with repeated interruptions or the interruption of a highly salient activity or cognitive process, will result in a high level of autonomic arousal. Strong autonomic arousal in response to interruption is experienced subjectively as distress.

This view of stress from interruption theory relates very well to an identity theory approach to stress as well as to the understanding of stress processes as described by sociologists (e.g., Pearlin, Lieberman, Menaghan, and Mullan 1981; House and Harkins 1976).

## IDENTITIES

According to identity theory, the *identity process is a control system* (Burke 1991; Carver and Scheier 1981). An *identity is a set of "meanings"*

applied to the self in a social role or situation defining what it means to be who one is (Burke and Tully 1977).<sup>2</sup> This set of meanings serves as a standard or reference for who one is. When an identity is activated, a feedback loop is established (Burke 1991; Powers 1973). As indicated in Figure 1, this loop has four components: a *standard* or setting (the set of self-meanings); an *input* from the environment or social situation (including one's reflected appraisals, i.e., perceptions of self-relevant meanings); a *process that compares* the input with the standard (a comparator); and an *output* to the environment (meaningful behavior) that is a result of the comparison. The system works by modifying output (behavior) to the social situation in attempts to change the input (reflected appraisals) to match the internal standard. In this sense, the identity control system can be thought of as having a goal — matching the environmental inputs to internal standards. What this system attempts to control is the input. As a basically homeostatic model, this view of identities is similar to views such as cognitive dissonance theory. However, it is more specific since this model is explicit about what must be congruent (the input and the identity standard) and, as discussed later, what the consequences are if congruence does not exist.

An easy way to think about this model is to apply the functional analogy of the thermostat. The thermostat has a standard or setting (let us say 70 degrees) and an input (temperature). Built into the thermostat is the ability to compare the input with the setting. Outputs are a function of this comparison. If the input is 65 degrees (five degrees less than the setting), the comparison results in an output that turns the furnace switch on. Thermostat output to the furnace switch continues until there is a match between the input (current temperature) and the standard (70 degrees in our example).

In terms of the identity process, the standard or setting is scaled not in degrees but in the meanings persons hold for themselves in a role. For example, a person's gender identity might be set at a certain degree of masculinity; or a person's college student identity might be set simultaneously at certain degrees of academic responsi-

<sup>2</sup> As Burke and Freese (1989) have pointed out, this set of meanings includes both symbolic and nonsymbolic components. The symbolic component includes our usual notion of meanings as involved in symbolic interaction. The nonsymbolic component includes the various resources that are controlled by a person in a role.

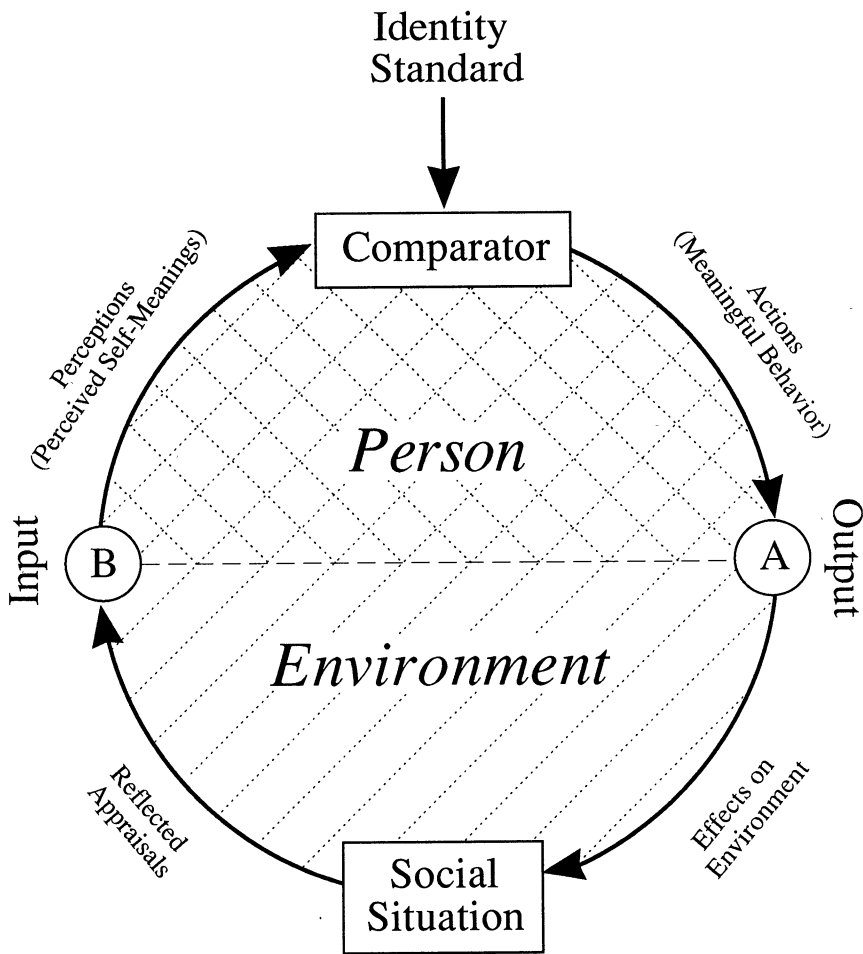


Figure 1. The Control-System View of the Identity Process: The Cycle of Meaning Showing Possible Points of Interruption at A and B

bility, intellectualism, sociability, and personal assertiveness.<sup>3</sup> Whatever the settings, these standards within the identity process establish the meaning of the person's "identity." Using Os-good, Suci and Tannenbaum's (1957) view of meanings as mediational responses, the identity standard can be thought of as a "set" or *N*-dimensional vector of meanings. These are "fundamentals" in the language of Affect Control Theory (Smith-Lovin and Heise 1988).

Identity theory also considers the inputs to the identity process to be in the form of an *N*-dimen-

<sup>3</sup> These were the dimensions of symbolic meaning found by Burke and Reitzes (1980) to distinguish among the role/identities of college student, high school student, graduate student, college graduate, non-college peer.

sional vector of *perceived* meanings of who one is as implied by the social setting — the reflected appraisals. Since both the input and the standard consist of similar content, the comparison process evaluates the degree to which they correspond. When the input meanings are incongruent with the identity meanings, (1) a subjective feeling of distress occurs that increases with the degree of incongruence (Zanna and Cooper 1976), and (2) because of the distress, outputs from the identity system to the environment will change.

The environment is a social interaction system that includes resources and the behaviors of others. The outputs to the environment are meaningful behaviors that may modify these resources and the behaviors (Burke and Reitzes 1981). Normally, the effect of these outputs (social ac-

tions) on the social interaction system completes the feedback loop, resulting in new inputs to the identity system (reflected appraisals or perceptions of self-meanings in the social setting). These new inputs tend toward congruence with the standard and result in decreased distress. However, congruence is not automatic. Rather, people continue to vary their outputs to maintain congruence, attempting to keep the behavior of others reflecting the identity standard they possess (Swann and Hill 1982). This process of achieving and maintaining congruence may become relatively efficient and automatic over time as the individual learns the patterns of the interaction system and how to effectively manipulate them. It is the inputs that are the controlled variable in the identity control system. It is the inputs that are altered (by changing output behavior) to match the standard. The input meanings themselves do not cause behavior, nor does the identity standard itself cause behavior. Output behavior results from the comparison of the input meanings with the identity standard.

As an example of the identity process, consider a woman whose identity as a mother includes, among other components, a certain degree of *powerfulness* (a general and universal dimension of connotative meaning—cf., Osgood et al. 1957; Osgood, May, and Miron 1975). Suppose that for some reason her “mother identity” is important to her and it is activated in a situation. Assume, further, that the inputs she is receiving (perceptions of her self implied in the behaviors of others) do not match the degree of powerfulness that is set in her mother identity. The identity process model suggests that she will feel distress as a result of this incongruence. To relieve this distress she will, therefore, change her behavior, thereby changing the situation and altering the inputs she receives. For example, she might stand up for her rights, behave more firmly, be more assertive, acquire more resources, etc. If these outputs result in perceptions of herself (through others as her looking-glass) that match the powerful component of “mother identity,” her distress will abate and the new behaviors will be maintained.<sup>4</sup> It is the perceptions that must match the identity standard when a particular identity is activated. Achieving a match between perceptions of self and identity

standards may involve extensive negotiations and symbolic interaction with others; it may involve exchanges and the control of resources (Burke and Freese 1989). But the controlling mechanism for each individual in these negotiations is that perceptions of the self in the situation must match the identity standard.

Swann and Hill (1982) demonstrated this mechanism in an experiment: Persons who identified themselves as dominant acted in even more dominant ways if they received feedback that they were seen as submissive. Similarly, persons who identified themselves as submissive acted even more submissively if they received feedback that they were seen as dominant.

This model of the identity process builds on current evidence that people feel some level of distress when they receive feedback that is incongruent with their identity, *even if that feedback is more positive than their identity*. While this conclusion may seem somewhat counterintuitive, it has been documented relatively extensively. For example, early experimental evidence showed that people who expect failure are somewhat discomfited by success (Aronson and Carlsmith 1962; Brock, Adelman, Edwards, and Schuck 1965; Deutsch and Solomon 1959). Recent survey research has shown that positive life events have negative health consequences for persons with low self-esteem but not for those with high self-esteem (Brown and McGill 1989). And other recent experimental research has shown that people seek positive feedback if they have positive self-concepts but prefer negative feedback if they have negative self-concepts (Swann, Pelham and Krull 1989). In general, the thrust of current and past research supports congruence theories rather than enhancement theories of the self.<sup>5</sup>

## IDENTITIES AND STRESS

Given this model of the identity process, I now examine how interruption theory can be linked to identity theory to yield a better understanding of stress. The key is to remember: (1) when an identity is activated, identity processes operate continuously through time to maintain congruence between the identity standard and reflected self-appraisals; (2) the output of the identity sys-

<sup>4</sup>Carver and Scheier (1990) suggest that the rate at which congruence is restored is an important determinant of affect. If it is restored quickly there will be a positive subjective feeling and an increase in self-confidence that may act to reinforce the new behavior.

<sup>5</sup>Swann (1990) has begun to develop an integration of self-enhancement and self-congruence theories which notes the conditions under which each process may dominate motivation.

tem (meaningful behavior) is linked to its input (perceived self-meanings) primarily through the social environment. An identity process is a *continuously operating, self-adjusting, feedback loop*: individuals continually adjust behavior to keep their reflected appraisals congruent with their identity standards or references. In familiar situations, this adjustment process is nearly automatic, requiring little or no attention. Since the identity process is continuous, the amount by which one's reflected appraisals differs from one's identity standard is kept small. The existence of a relatively large discrepancy is likely to indicate some type of interruption in the identity process that has suspended the normal condition of continuous congruence between reflected appraisals and identity standard.

As the incongruence between one's reflected appraisals and one's identity standard is created and grows beyond the minimal discrepancies that are handled automatically (or perhaps ignored), first, one's attention is directed to the discrepancy as the identity process is brought under conscious control. If the incongruence increases, distress increases providing both an alarm system and motivation to remediate the problem discrepancy.

To the extent that an identity is well-established there is better organization of the feedback process. In addition, the more salient the identity, the more important this process is. Both of these conditions, organization and salience, are important. Interruption theory suggests that the interruption of more organized and salient processes (such as identity processes) leads to the heightened autonomic activity experienced as distress (Mandler 1982).

Consider again the example of the mother who fails to perceive herself in a situation as being as powerful as her identity standard indicates. Suppose her rather automatic efforts to establish herself as more powerful in the situation by modifying her behaviors meet with no success. Her identity processes fail or are interrupted. Because these established and important identity processes are interrupted, the model suggests she will feel distress. *Social stress results from the interruption of the continuously adjusting identity processes.*<sup>6</sup>

<sup>6</sup> It is possible that in the future we may need to distinguish interruption from prolonged failure of congruence between identity perceptions and identity standard. The latter might be exemplified by occupational stress when performance can never be up to what one wants or others demand (cf., House 1974) or by people with stigmatized identities where the person receives feedback that they are not good even though

Any process or event that prevents a person from outputting behaviors that change the reflected appraisals of others to be congruent with their identity standard (interrupting the cycle at point A of Figure 1) or that prevent a person from being able to perceive the reflected appraisals of others (interrupting at point B of Figure 1) constitute an interruption of the identity process.

This model is most similar to Brown's identity disruption model (cf., Brown and McGill 1989) which suggests that the negative effects of life events operate through the process of creating alterations in self-concepts — alterations that have a negative impact on health. Brown, however, did not clearly specify the nature of identity disruptions and the mechanisms by which such disruptions influence health. He defined identity disruptions as any change to existing identities: abandoning old identities, adopting new identities, or changing the structure of the self-concept. The negative effects of such identity changes are brought about in the Brown model as a result of the loss of efficiency in processing self-relevant information and in making behavioral decisions.

The identity model I present here is concerned less with changes to existing identities and more with disruption or interruption of the continuously operating identity process. Severe interruption of this continuous process, i.e., repeated interruption or interruption of salient processes, produces the heightened autonomic activity that is distress. Distress comes not from the loss of efficiency as in the Brown model (though loss of efficiency may contribute to further stress if it creates more interruptions of the identity process). The problem is the distress and its consequences.

Let us consider a number of ways that disruption or interruption of the identity process can lead to distress. Interruption, as outlined in interruption theory, must be distinguished from the continuous adjustments that occur in the normal identity control processes. Interruption is not just a lack of congruence between the reflected appraisals and the identity standard. Rather, the normal, continuously operating control process is prevented by interruption from making its usu-

ally they want to be — i.e., their identity says they are good. Currently, the only difference between interruption and prolonged failure would be in the degree of distress experienced and the greater likelihood of identities being changed under conditions of prolonged failure of congruence. See section on "Identity Change" below.

ally automatic adjustments, thus putting the person in a distressed state.<sup>7</sup>

Interruption of the normal identity processes can lead to varying levels of distress. The magnitude of distress experience by an individual is a function of the severity of the interruption itself, the degree to which the interrupted identity process is highly organized, the degree to which the individual is committed to the identity, and the significance to the individual of an interrupted source of input (feedback). Specifically, I hypothesize that the interruption of an identity, once that identity has been activated, leads to higher levels of stress in the following situations.

- H<sub>1</sub>: *Repeated or severe interruptions* of the identity process cause greater distress than occasional or infrequent interruptions.
- H<sub>2</sub>: Interruption of the identity process causes greater distress when the interrupted identity is *highly salient* than when it is less important, i.e., higher levels of distress are associated with the interruption of identities that are most important to a person.<sup>8</sup>
- H<sub>3</sub>: Interruption of the identity process causes greater distress when the interrupted identity is one to which the person is *highly committed*, i.e., higher levels of distress are associated with the interruption of a highly committed identity because the individual is more dependent on it.<sup>9</sup>
- H<sub>4</sub>: Interruption of the identity process causes greater distress when the source of the perceived identity (input) is significant to the individual, i.e., interruption of feedback from a significant other is more distressful than interruption from a casual acquaintance.

<sup>7</sup> While the discussion here concerns interruption of the cycle of meaning in identity processes, one might also ask if distress could result from, say, a difficult task. The present discussion would be relevant only if performance of the task were under the control of an identity; failure in the task would have identity implications that are part of the input that is monitored. Theoretically, the issue would be whether behavioral performances exist that are not under the control of an identity. Interruption of those performances would then be a source of distress that is outside the domain of the present discussion.

<sup>8</sup> The "salience" of an identity is its relative likelihood of being activated in a particular situation as compared to another identity (Stryker 1980). Identities that are more salient are also more likely to be central or important to the individual.

<sup>9</sup> "Commitment" refers to the strength of the re-

With respect to hypothesis 4, significant others are people around whom the individual has habitually built a cycle of meaning as a tightly organized process. Interruption of such a tightly organized process would produce more distress than interruption of a less organized process.

## IDENTITY INTERRUPTION

Based upon the merger of interruption theory and identity theory, I consider four general conditions that should lead to feelings of distress. Within each of these four conditions there may be one or more related conditions that produce distress.

### *The Broken Loop*

First, the identity process can be interrupted if *the loop of the identity control process is broken by external events* interrupting the normal, continuous, automatic adjustment process. The identity process is a closed loop through the situation or social environment from input to output and back to input. When that loop is broken, the identity process ceases to function normally. I consider two ways in which the loop can be broken.

First, the loop can be broken at the point where the output (behavior) enters the environment (point A in Figure 1). *An individual's behavior in a situation (environment) may have little or no effect on that situation* — it may not influence the way others behave toward, label, or treat him or her. Attempts at meaningful interaction may fail. Others may not recognize the individual's efforts. Others may not pay attention. Others may impose a meaning on the individual independent of the his or her wishes or behavior. All of these situations lead to feelings of low self-efficacy, alienation, disaffection, estrangement and the like on the part of the individual (cf., Blauner 1964; Burke and Tully 1977; Gecas and Schwalbe 1983; Seligman 1975).

Such lack of effect of the individual's behavior on the situation would also be associated with the loss of identity, or the loss of a sense of self ("it's as if I don't exist"). This is the source of distress identified by Stein, Vidich, and White (1960). It is also the source of distress associated with the loss of a job (Gross 1970) or the loss of a loved one (Croog 1970) where one's identity (standard) is no longer applicable. In such cases,

sponse an individual makes to restore perceptions of the self (inputs) to match the identity standard when there is a discrepancy between them (cf., Burke and Reitzes 1991).

the feedback to maintain the identity is not forthcoming from others no matter what behavior is output — one can no longer act in the usual way to control reflected appraisals. For example, Strobe, Gergen and Gergen (1982) noted that the death of a spouse disrupts many ongoing aspects of one's life as the partner on whom one has depended for many shared response sequences is lost. And, that disruption is a source of distress interfering with post-death adjustment. Remondet, Rule, and Winfrey (1987) find that those widows with advanced warning of a spouse's impending death who began to plan and make decisions for their future (housing, financial and legal affairs), and who began to do things on their own before the death suffered less disruption and less distress.

Second, the loop of the identity control process can be broken at the point at which input is received from the environment (point B in Figure 1). *The individual may not be able to perceive (understand) the meanings in the situation (environment), or may perceive them incorrectly.* Here we deal with the individual's perception of the situation (input side) rather than his or her behavior in the situation (output side). In this case the individual's behavior has effects but he or she does not perceive those effects, or misreads or misunderstands them for some reason. The individual may have feelings of being misunderstood. The individual's efforts may be ineffective because he or she does not know how to read or understand the meanings that others display. This might happen when one is in a new culture or subculture with which one is not familiar. It may happen because one distorts perceptions for some reason (e.g., attributional biases, cf., Bradley 1978; Kruglanski and Ajzen 1983) or does not fully understand the implications of those perceptions (Brown and Harris 1978).

The difference between a broken loop at point B and point A in Figure 1 is that at point A one's behavior has no effect — at point B one can see the effects of one's behavior but the effects are unexpected. The perceived meanings cannot be brought into congruence with the identity standard. This creates the distress associated with being in new and strange environments, meeting new people, or entering into new roles such as getting married or starting a new job.

The result of either of these forms of disruption (on the output side, A, or the input side, B) is the repeated inability of the identity process to properly match the input and the standard, thus putting the person in a state of distress. This is

illustrated in an old study by Harvey, Kelley, and Shapiro (1947) on the reactions of college students to unfavorable personal evaluations. Subjects rated themselves on a series of important social attributes. In a later session they rated another person in their college class — sometimes a person who knew them and sometimes a person who did not know them. The subjects were then shown fictitious ratings of themselves that were ostensibly made by the other person. For some these ratings were very much lower than their self-evaluations and for others they were only slightly lower. In neither case were the subjects able to do anything to alter or control the other's ratings of them. The results showed that the "level of tension" experienced by the subjects varied with the degree to which the ratings they received differed from their self-ratings, and whether the person rating them was an acquaintance or a stranger. This latter result illustrates the importance of identity salience and significant others in the identity process. Incongruence between perceived self-meanings and a highly salient identity or an identity involving a significant other led to high levels of distress.

#### *Interference From Other Identities*

A second source of distress is that there may be a *negative connection between (among) two (or more) identities* such that increasing the congruence with respect to one identity, decreases the congruence for the another, i.e., if one identity is maintained, then other identities must be interrupted. For example, there may be time constraints (one can't be in two places at the same time), or there may be meaning contradictions (being a male may mean acting tough while being a minister may mean acting tender), or one may be over-committed to a particular identity and pulled away from engaging other role identities. In the role literature, these processes have been talked about in terms of role conflict or role strain (Gross, Mason, and McEachern 1958; Goode 1960; Marks 1977). Both are well-known sources of distress.

Here I suggest that interruption theory can help us understand role conflict as previously defined by identity theory. Feelings of distress occur because one identity adjustment process is interrupted while another is maintained — one is caught in a cycle of interrupting one identity to maintain the other and then reversing the process. Such a "juggling" process could account for the high distress levels of homemakers and employed women relative to employed men (cf.,

Gove 1984). Indeed, the varying levels of distress noted for employed women (sometimes closer to the levels for homemakers and sometimes closer to the levels for employed men) may be accounted for by the specific identities each has, and more importantly, by the degree of interruption of one identity by another. As Thoits (1986) has pointed out, having more identities, to a point, does not generate more distress and may even reduce it. However, particular identity combinations are likely to produce distress, especially combinations that interrupt each other with demands. Thoits noted, for example, that for women the combination of employment, marriage, and parenthood is particularly stressful.

With some identity combination, one identity may depend upon another for resources, and if the "resource" identity is interrupted a "chain reaction" of interruptions can result. For example, disruption of a job identity and the meanings and resources that are controlled by that identity may have a disruptive or interruptive impact on one's marital or family identities to the extent that these latter identities depend upon resources from the former. The resulting distress is then the cumulative effect of the interruption of several identities.

Thus, the issue may well not be the number of identities, but the degree to which particular identities are likely to interrupt others. The stressful nature of incongruent or dependent identity combinations can be understood when examined from the perspective of interruption theory.

#### *An Over-Controlled Identity System*

The *tightness of the identity control system* is a third factor that can determine levels of distress and anxiety. A "tightly" controlled identity is one that attempts to match the reflected appraisals (input signal) to the actual identity (standard) almost exactly. A "loosely" controlled identity, on the other hand, allows the reflected appraisals to vary to a degree before indicating a discrepancy and altering the output. A tightly controlled identity is likely to lead to greater frequency and higher levels of distress, especially in environments with variable reflected appraisals or resource flows. *Individuals who have a tightly controlled identity must monitor and adjust their identity process frequently, and because conscious attention is limited, this frequent adjustment can interrupt other processes or be interrupted by other processes.* These frequent interruptions by the process itself are associated with distress.

For example, consider gender identity. A person with a strong gender identity might closely control his or her gender-relevant reflected appraisals. In this case, a person with a strong masculine identity is not necessarily extremely masculine, but he cannot tolerate being in situations where he is perceived<sup>10</sup> as very much different from "masculine" as his identity has defined it; any perception that does not strongly agree with his identity standard must be corrected.

On the other hand, a person with a more androgynous gender identity is more flexible and does not need to control his reflected appraisals as much as the person with a sex-typed identity. In this case, androgyny is viewed not as having both masculine and feminine traits, but as having an open and flexible identity that allows an individual to behave in ways that are to their advantage, even though he or she may be sometimes perceived as more masculine and sometimes as more feminine. In this sense, the androgynous person does not need to work as hard to maintain his or her gender identity as the sex-typed person and is therefore less likely to have an interrupted identity process or have the identity process interrupt other activities. The result is less distress. This mechanism could account for the findings that persons with androgynous gender identities tend to have higher feelings of self-esteem and self-efficacy (Spence and Helmreich 1978; Spence and Helmreich 1979).

Similarly, "Type A" personalities may have more tightly controlled identity systems with more rigid, and therefore easily interrupted, organizations (cf., House 1974; Jenkins 1971). Such tightly controlled identity systems are not only more easily interrupted, but interruptions cause more disruption than for more loosely controlled identity systems. In the study of police dispatchers, Kirmeyer (1988) shows that Type A persons feel more distress than others, even when the number of objective interruptions of their job performance is controlled. Authoritarianism (Adorno Frenkel-Brunswik, Levinson, and Sanford 1950) and closed-mindedness (Rokeach 1960) may represent other manifestations of this sort of tightly controlled identity system. This would explain higher distress levels for people with these characteristics.

Related to the tightness of the control system governing the identity process is the effect of time constraints on role performance. Earlier I

<sup>10</sup> Strictly, where the person sees himself/herself as reflected in the actions of others.



discussed the potential conflict between two identities that may be competing for time, for example a work/profession-based identity and a family-based identity. However, time constraints on the role performance of a single identity can have much the same effect. With time constraints proper performance may not be possible so that some control over meaningful performance is lost and the identity system is disrupted (cf., French, Tupper, and Mueller 1965). In addition, the identity system may become more tightly controlled with the increase of time pressure, resulting in other processes being interrupted (time for family gives way as work demands increase) or in the interruption of the tightly controlled identity process (failures become more disruptive because of the time pressures, minor interruptions have greater impact and lead to more distress).

### *Episodic Identities*

A fourth source of interruption results from the *episodic performance of a role*. The interruption of the identity process in this case is caused by the lack of performance feedback during times when the role is being rehearsed, but not being performed. People need practice and feedback to learn how to change incongruent self-meanings to match their identity standards. However, when a role is episodic, continuous practice and feedback is not possible, and it is more difficult to maintain close congruence between self-perceptions and identity. In a sense, all roles are episodic in nature because we move from role to role on a cyclic basis. Thus, this is an issue of degree and not of kind. For those roles and identities that are taken up episodically and irregularly, distress is likely to occur because extended interruptions in feedback occur over time.

People in episodic roles may mentally rehearse what to do to control their performance so that proper self-meanings are perceived. They may play out "what if" scenarios. "What if this happens?" "What if that happens?" To the extent that a person is "into" the identity while fantasizing, this mental activity may generate a certain amount of distress. This interruptive mental activity would be especially likely if the role is not learned well enough that the behavior required is automatic. In that case there is true interruption of the identity process (in fantasy).

For example, people who are performing in a play for the first time become anxious about their upcoming performance. And people become anxious when their performance is evaluated only

episodically, as in contests and competitions, annual reviews, tenure reviews, and so on. When evaluation is episodic a continuous feedback process is not possible and thus episodic evaluation constitutes interruption of the normal identity processes.

### STRESS AND EVALUATION

It is commonly understood that people feel anxious and distressed when they know they are either being evaluated or are about to be evaluated (Holroyd and Lazarus 1982). Why does evaluation produce stress, and how does this relate to identity processes? I outline several possibilities from the point of view of the model of identity processes and interruption theory I have presented here.

First, consider the case where a negative evaluation has been made (relative to the person's own self-meaning). While this discrepancy is itself not necessarily an interruption, there are two ways it is usually considered. Several writers (Kaplan 1975; Pearlin et al. 1981) have suggested that people strive for self-enhancement. Negative evaluations interrupt or preclude reaching this goal, resulting in distress. In the model presented here, however, a self-enhancement goal is not necessary to predict distress. Instead, the present model notes that the negative evaluation presents a definition of the self that is incongruent with the identity standard. In fact, a lack of congruence would exist whether the evaluation was positive or negative relative to the self-evaluation. In either case, distress diminishes only when modifications in behavior effectively restore congruence (in this case, by securing a good evaluation).

The debate between supporters of self-enhancement (e.g., Kaplan 1975) and congruence (e.g., Swann 1987) explanations of stress is fairly extensive in the literature. However, most research supporting the self-enhancement goal as an explanation fails to consider the initial level of self-esteem (e.g., Tesser 1986) and tends to focus on persons with high initial levels of self-esteem. Under these conditions, the predictions of the self-esteem enhancement model and the congruence model are the same. It is only when self-esteem is low that the two models make different predictions. Recent, as well as older research, in which initial self-esteem level is considered, suggests that at least in the cognitive domain the congruence model as represented here is the most effective and substantiated model (Deutsch and Solomon 1959; Swann, Hixon, Stein-Seroussi,

and Gilbert 1990).<sup>11</sup> Brown, Collins, and Schmidt (1988), for example, show that people with low self-esteem tend to act in ways to mitigate self-enhancement. And, as stated earlier, positive life events have been shown to have negative consequences for persons with low self-esteem (Brown and McGill 1989). Epstein (1980) points out that “to note that some individuals are motivated to maintain low levels of self-esteem is not to suggest that self-esteem can not be raised, but to indicate that, for good motivational reasons, it tends to be resistant to change” (p. 107)

A second way that evaluation creates stress is that the process or impending process of evaluation itself may interrupt normal identity maintenance processes and produce distress. Consider the case when the evaluation is known to be forthcoming.<sup>12</sup> From the time the impending evaluation is known about until it occurs, *people may interrupt the processing of normal immediate cues about how they are doing in a particular identity, and shift their attention to the forthcoming evaluation.* This interruption may also extend to other identities (that are not under impending evaluation) so that these identity processes are interrupted as well. This self-preoccupation (interruption of normal identity process to consider ways of dealing with an impending evaluation) has been shown to be characteristic of test-anxiety (Sarason 1988). Interruption and identity theories help us to understand this source of distress. In addition, evaluations that are not continuous but occur only intermittently do not allow the identity process to make its normal continuous adjustments. In this sense one loses control and the situation appears unpredictable. This loss of control in the face of an impending evaluation is a form of interruption of the continuous identity process.

Also, in becoming sensitive to the impending evaluation, *people may become aware of their own misattributions and perceptual biases that are part of the normal processing of meanings*

<sup>11</sup> Even so, it is possible that the effects of discrepancy differ depending upon the direction of the discrepancy.

<sup>12</sup> A potential source of confusion here is that one may be *evaluated* on several dimensions of meaning. One dimension of meaning on which evaluation may take place is the *evaluation* dimension (Osgood et al. 1957). It is this dimension to which I referred in the paragraph above. Other dimensions of meaning on which one may be evaluated include activity, masculinity, etc. Care should be taken to distinguish evaluation as a process from the evaluation dimension of meaning.

*from the environment.* In doing so, they may become aware of discrepancies between their “newly perceived” self-meanings and their identities. People cannot totally make up their own inputs independent of environmental conditions — mental health requires “reality checks.” That is not to say, however, that perceptual distortions of environmental meanings never occur (Bradley 1978). Usually, these distortions are in the direction of agreement with the identity standard. If they are interrupted, distress ensues (Harvey et al. 1947).

Finally, in becoming sensitive to an impending evaluation, *people may tighten the control systems for the identity being evaluated* in an effort to make sure their performance is up to standards. In doing so, they must deal with those problems integral to tight control systems: the need to constantly monitor the identity process that may cause interruption of other processes or be more frequently interrupted itself. Again, the result is distress.

To summarize, the evaluation process — being evaluated by an external agent — can place stress on the identity system of people. This can happen during the evaluation process itself, but is more likely to occur in anticipation of being evaluated. However, I suggest that the way evaluation produces distress does *not* involve new principles. The basic mechanism remains the same: Distress results from the interruption of normal identity processes.

## IDENTITY CHANGE

Thus far I have discussed how people change their behavior when their self-perceptions are incongruent with their identities. When changes in behavior do not result in greater congruence between self-perceptions and identities, feelings of distress result. However, if congruence cannot be achieved by changing outputs and inputs, then the identity or standard of comparison itself may be changed. In the identity model, this is accomplished through a second-order feedback loop (Burke 1991).

The model of identity processes illustrated in Figure 1 is incomplete — no source is shown for the identity standard. A more complete illustration of the identity process would show that the identity standard is itself an output from a higher level control process with its own standard, comparator, and input (Powers 1973). The input to this higher level control loop comes from the environment and some part of that input may be the same as to the lower level identity process. In

this way, the higher level process monitors certain aspects of the environment, and adjusts its output as a function of the comparison of its input with its standard. Since the output of the higher level process is the identity standard in Figure 1, such adjustments are in the form of changing the identity standard in the lower level process.

Thus, one's identity may change as a result of the higher level process trying to match its input to its standard. While we do not know, at this point, what the higher level process receives as input, one possibility is that it may use information from both the output and the input of the lower level identity process in the form of the ratio of these two quantities. A high output/input ratio may indicate problems, i.e., a lot of effort is necessary to maintain consistent input. If the higher level process "perceives" the magnitude of this ratio to go above *its* standard, a change in identity standard will occur.

In this way, if the lower level process cannot create congruence between the input self-meanings and the identity standard, stress occurs and the output/input ratio goes up. The higher level process, in effect, notes this condition as part of its input. Such a condition, as part of the input at this level, make the input differ from the higher order standard. The higher order comparator notes this incongruence. As a consequence, the output of the higher order comparator changes (that is, the identity standard in the lower order process changes). If this change in the identity setting results in increased congruence between the (new) identity standard and reflected appraisals and the output/input ratio falls off, then the output from the higher order process will be maintained with the new identity.

In this model, then, an individual's identity can and will change, but it does so only if the lower level identity process cannot maintain congruence of the reflected appraisals and the identity standard over some period of time or number of disruptive events. As discussed above, these conditions for identity change are the same conditions in which distress is felt. Indeed, distress plays a major role in identity changes. This has been shown in studies of mid-life crisis (Farrell and Rosenberg 1981) as well as in the more extreme settings of concentration camps (Bettelheim 1943) or prisoner of war camps (Schein 1957). For example, Schein (1957) pointed out that the effectiveness of the Russian and Chinese indoctrination techniques depended on the destruction of the prisoner's "social ties and identifications" and the subsequent offering of "a new

identity." The former interrupted normal identity maintenance processes and produced immense distress and anxiety; the latter provided a way to reduce distress by reestablishing normal identity processes, albeit with a new identity. Less extreme examples were offered by Farrell and Rosenberg (1981) who indicated that identity changes in midlife are often the result of accumulated discrepancies with former self-conceptions. In addition, based on a longitudinal study of adults over a period of eight years, Shanahan (1985) concluded that identity changes during this period center around the reorganization of the personality toward internal consistency when that had been lost.

## CONCLUSION

Social stress has traditionally been viewed as an overload, where the demands made exceed existing abilities (House 1974). While the subjective and interpretive processes involved in social stress have been widely recognized (cf., Lazarus 1966), few clear understandings or models of this process have been presented. One exception, of course, is the work of Pearlin et al. (1981) on the stress process. The interruption theory of stress (Mandler 1982) makes it possible to move beyond this impasse.

By incorporating the ideas of interruption theory into the understanding of the identity process from identity theory, we can more fully comprehend the situations and conditions that lead to distress (anxiety). I have presented an outline of that integration. Although I have not identified new sources of distress and anxiety, I have shown that a wide variety of situations shown to be anxiety- or distress-provoking have one mechanism in common: They all involve disruptions or interruptions of identity processes.

Pearlin et al. (1981) point to a similar conclusion in their theoretical discussion of the stress process, although they focus on different mechanisms. In their model, stress production begins similarly with "disruptive events" (disruptive job events in their model). These feed into depression<sup>13</sup> (the stress reaction) directly, but also indirectly through changes in the self, specifically in reduced self-esteem and mastery. From the per-

<sup>13</sup> The work of Higgins (1989) has shown that discrepancies between the reflected appraisals and one's ideal self-image (what one would like to be) lead to depression, while discrepancies between reflected appraisals and one's ought self-image (what one feels one ought to be) lead to anxiety and distress reactions.

spective of Pearlin et al., self-variables are central to understanding distress.

While Pearlin et al. come to similar conclusions about the importance of self-variables in the stress process, their model is slightly different from the identity theory model. In contrast to the Pearlin et al. model, the identity theory model does not link disruptive events directly to self-esteem and mastery. Instead, disruptive events cause an *interruption of the normal identity process* and a failure to bring self-perceptions into line with the underlying identity standard. This results in autonomic activity subjectively felt as distress. Another consequence of this failure in the identity control process is the lessening of a person's feelings of efficacy or mastery because *he or she is not able to match inputs with the identity standard*. Finally, the identity model suggests that a loss of mastery results in a loss of self-esteem, and perhaps, a rise in depression. People feel good about themselves if and when they can control events and actions to maintain the correspondence between inputs and the standard. Thus, identity theory interposes interruption of identity processes between the disruptive life-event and the feelings of distress (depression) and lowered mastery. In addition, lower self-esteem is seen as a consequence of lower feelings of mastery.<sup>14</sup>

The present model goes beyond the Pearlin et al. model by specifying the underlying mechanisms for stress: interruption of the identity process. It also goes beyond the Pearlin et al. model by suggesting additional situations that may lead to stress via these same mechanisms: interruption of the identity process.

A second implication of the present model is to reaffirm a characteristic of identities that was understood within the symbolic interaction perspective outlined by Blumer (1962), but has been relatively neglected with the more recent formulations of structural symbolic interaction (Stryker 1980). That neglected characteristic is the "processual" nature of identities. Identities are not just states or traits of an individual that are relatively fixed. As we have seen, an identity can be conceptualized as a feedback process: a *continuously operating* loop of input meanings to output meanings and output meanings to input meanings. It is the interruption or disruption of that continuous process that constitutes distress.

<sup>14</sup> This modified model fits the data published by Pearlin et al. (1981, Appendix D) somewhat better than the original model. This reanalysis is available from the author.

This leads me to a final point that flows from the model I have presented. In future discussions of coping and problem-solving in response to stress, the focus should be on how to restore the interrupted identity process or facilitate identity change to restore congruence between the identity standard and the input meanings. This focus has the potential of bringing coherence to many of the analyses of stress buffers and coping mechanisms that have already been discussed in the literature (cf., Clausen and Kohn 1954; Lazarus 1970; Pearlin and Schooler 1978; Thoits 1983; Lin, Woelfel and Light 1985).

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