



ADVANCES
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21

The Self in Anxiety, Stress and Depression

Ralf Schwarzer
Editor

NORTH-HOLLAND

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STRESS AND DEPRESSION**

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Editors

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THE SELF IN ANXIETY, STRESS AND DEPRESSION

Edited by

Ralf SCHWARZER

Free University of Berlin

Berlin

Federal Republic of Germany



1984

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PREFACE

The problems addressed in this book are related to self-referent thought and emotional states and traits. This is a topic which receives more and more attention. Viewing emotions and actions from a cognitive perspective has become a common and well-accepted practice. The chapters deal with specific empirical problems in research on stress, anxiety and depression which can be solved or clarified by investigating the role and functioning of the self in the face of taxing or threatening environmental demands. The organized knowledge about oneself based on previous experience can be seen as a moderator of self-regulatory processes and coping attempts. Self-awareness and the expectancy of self-efficacy are key variables in the determination of instrumental actions and emotional states. Social anxiety and test anxiety as composed of worry and emotionality are central constructs in this realm of psychology and play a crucial role in the development of stress, helplessness and depression. Appraising a situation as ego-threatening is a common source of anxious arousal. Here, the appraisal of the self as competent or invulnerable is most influential in coping with threat. The development of learned helplessness and dispositional depressive mood is characterized by self-related cognitions, by an unfavorable attributional style and, partly, by distortions of reality. Vulnerability towards psychic disorders can be determined by perceived lack of resources within the person such as self-regulatory competence or by lack of environmental resources such as social support. The intention of this book is to further the idea of self-related cognitions as an integral part of emotions and actions. Processing information about oneself initiates or impairs instrumental behavior like effort or persistence in a variety of settings dependent on the specific circumstances.

The point of departure for the preparation of this book was an international conference entitled 'Anxiety and Self-Related Cognitions' which was held in Summer 1983 at the Free University of Berlin, West Germany. The meeting itself was financially supported by the Deutsche Forschungsgemeinschaft, the Free University and the Senator für Wirtschaft und Verkehr. Most of the chapters collected in the present volume are written by the speakers who delivered a revised paper for publication. Some additional chapters are submitted by invitation of the editor.

I wish to express my thanks to the contributors for the spirit of industry and cooperation displayed in fashioning their chapters. I am also deeply indebted to my coworkers Matthias Jerusalem, Manfred Kuliga, Hans-Henning Quast, Arne Stiksrud and Mary Wegner for their support in organizing the conference. Special thanks go to Helga Kallan who retyped the majority of the chapters and who coped successfully with the new word processor. Finally, I am grateful to Dörthe Belz, Joachim Faulhaber, Peter Kolehne and Anja Leppin who were responsible for the bibliography.

Berlin, February 1984

Ralf Schwarzer

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THE SELF IN ANXIETY, STRESS AND DEPRESSION: AN INTRODUCTION

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Many heterogeneous scientific approaches are directed to the self claiming to gain insight into the functioning and the hidden structure of human thinking, feeling and behavior. The present author favors an information-processing view which leads to assumptions about the development of the self, its cognitive dimensions and its relationship to some emotional or motivational concepts like anxiety, stress and depression. The key to understanding this interdependence is the 'self-related cognition'. Research projects on self-concept, anxiety, stress, coping, depression and helplessness share the idea that self-related cognitions are highly influential and deserve more attention. The following sections of this chapter contain statements about these research topics from the above-mentioned perspective. This chapter serves the purpose of introducing the reader to the empirical findings gathered in the present book.

THE SELF

Self-concept. Self-concept can be conceived of as the total of self-referent information which an individual has processed, stored and organized in a systematic manner. It can be defined briefly as a set of organized knowledge about oneself. For scientific purposes the self-concept can be used as a hypothetical construct with a multidimensional structure. Shavelson and Marsh (1984) subdivide the general self-concept into an academic, a social, an emotional and a physical self-concept, each of which can be further subdivided. A relatively stable hierarchy of cognitions represents the way how the individual sees himself and also delivers the categories for self-perception and self-evaluation.

With respect to self-worth, the 'self-concept of (academic) ability' is most important in our society (Covington 1984, Meyer 1984). Several factors play a role in developing such an image of oneself. First, direct and indirect information from the social world outside are relevant. Parents, peers and teachers provide evaluative feedback to one's performance in a variety of situations. If they praise the individual in response to an accomplishment, the person may be convinced of his competence. However, feedback does not always have a straightforward effect. Indirect communications like punishment can also lead to a positive self-concept under certain circumstances (Meyer 1984, Rustemeyer, this volume); or emotions can be transformed into self-related cognitions:

If the teacher expresses pity, the student may feel dumb; if she expresses anger he may feel lazy, etc. (Weiner 1982). The individual infers from others' communication to their perception and attribution of causes, and appraises this information as self-relevant. Second, the person relies on self-perception and self-evaluation by monitoring his accomplishments and attributing it to ability or to other causes. Also, memory scanning provides a selective retrieval of information on the self. The processes involved are self-reflective and comparative. Standards for comparison are based on social norms, or individual norms or on absolute criteria (Rheinberg 1980, 1982). The most powerful and efficient way of obtaining information about one's ability is by social comparison. This procedure allows a quick review of one's relative standing with respect to one or more target individuals who are characterized by 'related attributes' (Suls & Miller, 1977). In classroom environments and many other settings these social comparison processes yield results about an individual's rank position within a reference group (Hyman & Singer, 1968). Student self-concept of ability is developed mostly by school group effects (Jerusalem, 1983). Self concept stability and continuity over time is thoroughly discussed by Silbereisen and Zank (this volume).

Self-focus. The focus of attention is a key variable in information processing (see Claeys, this volume). Directing the focus to the self leads to a self-preoccupation which increases self-knowledge on the one hand, but can impair the ongoing action and debilitate performance on the other. The theory of objective self-awareness (Wicklund, 1975) states that self-focus makes certain aspects of the self more salient, and it motivates to reduce discrepancies. In an emotional state self-awareness leads to more affect. Buss (1980) distinguishes between private and public self-awareness. Private self-awareness is present when persons look into themselves, investigate their feelings and attitudes and ruminate about their identity. Public self-awareness is present when persons feel they are being observed by others or being evaluated. Then they worry about their public image. Self-awareness as a state is distinguished from self-consciousness as a disposition, both bearing a private and a public component. This has implications for self-presentation and for social anxiety (see Asendorpf, see Jones & Briggs, this volume).

Self-focus is often contrasted to task-focus, implying that the direction of attention is the major determinant of task persistence and accomplishment. However, studies by Carver and Scheier (1981, 1984) have proven that this dichotomy is too simple and misleading. At the trait level a high degree of self-consciousness makes the person prone to a high frequency of self-focussed attention. At the state level self-focus can be induced experimentally by the presence of a mirror or any other technical device which gives feedback of one's face, voice or behavior. Also it can be induced naturally by anxious arousal. The person perceives bodily changes like increased

pulse rate, blushing, sweating etc. which leads to self-focus and interruption of the on-going action. (It remains unclear, however, if either self-focus or interruption come first.) Self-focus, then, facilitates performance for low anxious and debilitates performance for high anxious people. This important statement in the work of Carver and Scheier raises the question of anxiety definition. If one equates anxiety with perceived arousal there would be no disagreement with the statement. But if anxiety is defined as a cognitive set of worry, self-deprecatory rumination and negative outcome expectancy combined with emotionality then their statement would be questionable.

Carver and Scheier redefine anxiety as a coping process starting with self-focus. Self-focus leads to an interruption of action and provokes a subjective outcome assessment. At this point the authors claim the existence of a "watershed" with respect to the content of the self-focussed attention: For some persons this state of self-awareness leads to favorable, for others to unfavorable outcome expectancies. The first group will shift to more task-focus, invest more effort, show more persistence and will gain more success. The second group will withdraw from the task mentally and will be preoccupied with self-deprecatory ruminations. Therefore they will invest less effort, are less persistent and probably will experience failure. The first can be defined as a low anxiety group, the second as a high anxiety group. A feedback loop makes the high anxious persons more prone to perceived discrepancies and interruptions of action by arousal cues. The key variables in this model are self-focus and outcome expectancies. Worry, here, is not the primary cause of performance decrements, it is only one element in a maladaptive coping procedure based on mental withdrawal and unfavorable expectancies. Self-focus gives way to a cognitive process where one's own coping ability is under scrutiny.

Self-efficacy. The notion of outcome expectancy or "hope vs. doubt" is similar to Bandura's (1977, 1982) concept of self-efficacy. This can be defined as a perceived action-outcome contingency attributed to one's ability. In our own model this is called "competence expectancy" (Schwarzer, 1981). Perceived self-efficacy can be acquired by direct, indirect or symbolic experience (Bandura 1977): Mastery of tasks provides information about one's capability to handle specific kinds of problems; observing similar others performing well on a task leads one to infer the same capability to oneself; being convinced verbally to possess the necessary coping strategies may also be sufficient to perceive oneself as competent.

Self-efficacy is partly responsible for the selection of actions, for the mobilization of effort and for the persistence at a task. People who are assured of their capabilities intensify their effort, whereas people who lack self-efficacy may be easily discouraged by failure. In a recent experiment Bandura and Cervone (1983) have studied the interplay of goal setting, performance feedback, self-dissatisfaction and self-

efficacy. It turned out that combining a personal standard with performance feedback of progress toward it was a better prerequisite for motivation than goal setting alone or feedback alone. Subgoals and standards had to be explicitly quantitative, challenging and temporally proximal in order to serve that purpose. In addition, perceived negative discrepancies between what to do and what to achieve created self-dissatisfactions which served as motivational inducements for enhanced efforts. High self-dissatisfaction with a substandard performance and strong self-efficacy for goal attainment made an impact on subsequent effort intensification. This finding sheds light on the role of self-doubts in motivation. Self-doubts are defined as a perceived negative discrepancy between the current performance level and the desired goal attainment. In applying acquired skills goals are hard to attain if one is plagued by self-doubts. The process of acquiring a new skill, however, is stimulated by self-doubts or slightly negative self-evaluations. Self-efficacy may be more important in the execution of established skills than in the learning of unfamiliar tasks. "In short, self-doubts create an impetus for learning but hinder adept use of established skills" (Bandura & Cervone, 1983, 1027).

This construct of perceived self-efficacy or competence expectancy could possibly be defined as part of anxiety. Bandura postulates an "interactive, though asymmetric, relation between perceived self-efficacy and fear arousal, with self-judged efficacy exerting the greater impact" (1983, 464). For him perceived self-efficacy and anxiety are different concepts, the first being the more influential for performance prediction. However, his definition of anxiety is not a cognitive one. Instead, it is something like fear or perceived arousal, in other words: he refers to nothing but the emotionality component when talking about anxiety. Therefore his findings indicating a superiority of self-related cognitions over "anxiety" is in line with those who claim the same hypothesis for the worry component of anxiety. The question raised by the findings of Bandura (1983) and Carver and Scheier (1984) and many others seems to be a matter of definition: Which theoretical concepts described in the process of coping shall be subsumed under the heading of anxiety? I prefer a broad conceptualization and suggest to use variables like perceived self-efficacy (hope vs. doubt), self-deprecatory rumination (worry) and mental withdrawal (escape cognitions) as constitutive cognitive elements of anxiety as a state and as a trait. Subdividing anxiety into more than the usual two components is in line with the findings of Irwin Sarason (1984), Helmke (1983) and Stephan, Fischer and Stein (1983).

Self-serving bias. Many people take credit for good actions and deny blame for poor outcomes. This is a well-known self-enhancement strategy in order to protect the self-esteem. It has a functional value for the maintenance of one's self-concept. Mild depressives were found to rate themselves in a realistic way, whereas nondepressed people tended to overesti-

mate their capabilities. Normal individuals have a tendency to make greater self-attributions for their own positive behaviors than for their own negative behaviors. One can easily distort any outcome by use of several kinds of self-serving bias. Evaluating oneself too positively may strengthen one's self-esteem and may make less vulnerable towards depressive disorders (Alloy & Abramson 1979, Lewinsohn, Mischel, Chaplin & Barton 1980). Realistic self-evaluation may be unfavorable for one's mental health. On the other hand, illusions of control may lead to an underestimation of academic demands and seduces people to select too difficult tasks which result in unexpected failures. Distortions of reality seem to be characteristic for highly self-reliant persons. In two experiments (Schwarzer & Jerusalem 1982) we gave students working on an intelligence task fictitious feedback and found statistical interactions between self-esteem and success vs. failure. It turned out that high self-esteem students attributed their presumable success to their ability but did not attribute their presumable failure to a lack of ability.

However, sometimes people accept responsibility for negative outcomes and deny credit for positive acts. The reason for such a 'counterdefensive attribution' may lie in a motivation for a favorable self-presentation. A positive public image requires modesty; therefore private thoughts about one's competence or morality are to be suppressed in favor of less positive statements which in turn serves the needs for public esteem. This is especially the case in situations where the subsequent behavior of the person is under scrutiny. People who accept undue credit for positive outcomes could experience an invalidation of their unrealistic statements by a subsequent failure. Such public invalidation would be associated with embarrassment and pose a threat to one's public image (Harvey & Weary, 1981). Therefore self-serving biases can be located at the level of covert self-perception or at the level of overt self-description depending on the kind of situation and on the state of public or private self-awareness.

ANXIETY

Test Anxiety. Anxiety can be defined as "an unpleasant emotional state or condition which is characterized by subjective feelings of tension, apprehension, and worry, and by activation or arousal of the autonomic nervous system" (Spielberger, 1972, 482). Test anxiety is a situation-specific state or trait which refers to examinations. As mentioned before, this may be confounded with social anxiety when the test is taken in public or when social interactions are part of the performance to be evaluated. Test anxiety theory has a long tradition which makes this phenomenon one of the most studied in psychology (Morris & Ponath, 1984; Tobias, 1984). However, as paradigms shift in our general psychological

thinking, this has a strong impact on the investigation of specific phenomena, too. The cognitive approach to emotions and actions has given rise to new concepts which are fruitful in understanding and explaining the subjective experience of anxiety in specific situations. The first three volumes of the new series *Advances in Test Anxiety* demonstrate the far-reaching consequences of cognitions of the worry type for our scientific knowledge (Schwarzer, Ploeg & Spielberger, 1982, Ploeg, Schwarzer & Spielberger, 1983, 1984).

Tests are mostly regarded as general academic demands in schools or in higher education but also can be conceived of as highly specific demands, as discussed in mathematics anxiety (Richardson & Woolfolk, 1980) or sports anxiety (Hackforth, 1983). Such demands - if personally relevant for the individual - can be appraised as challenging, ego-threatening or harmful (Lazarus & Launier, 1981). The appraisal of the task as ego-threatening gives rise to test anxiety if the person perceives a lack of coping ability. This second kind of appraisal is most interesting for the study of self-related cognitions. The individual searches for information about his specific competence to handle the situation. The coping resources looked for could be one's ability to solve the kind of problem at hand or the time available and the existence of a supportive social network (see B. Sarason, 1984). Perceiving a contingency between the potential action and the potential outcome and attributing this contingency to internal factors is most helpful in developing an adaptive coping strategy. This confidence in one's ability to create a successful action can be called self-efficacy (Bandura 1977). A lack of perceived self-efficacy leads to an imbalance between the appraised task demands and the appraised subjective coping resources and results in test anxiety which inhibits the ongoing person-environment transaction and decreases performance. This is a case of cognitive interference (I. Sarason, 1984). The individual's attention is divided into task-relevant and task-irrelevant aspects. The presence of task-irrelevant cognitions can be regarded as a mental withdrawal (Carver & Scheier, 1984). People who cannot escape from an aversive situation physically because of social constraints or lack of freedom to move, do so by directing their thoughts away from the problem at hand. Task-irrelevant thoughts can be divided into self-related cognitions (like worry about one's inability or failure) on the one hand and those which are totally unrelated to the task (like daydreams) on the other. This mental withdrawal from the threatening demands equals the test anxiety component which debilitates academic performance. The perception of discomfort and tension is the other component. Autonomic arousal may accompany this state or trait but need not. Mental withdrawal is maladaptive in a specific situation because it contradicts any kind of problem-centered coping action. However, in the long run there may also be a certain adaptive value because the person may learn to distinguish such situations from those which are easily manageable and therefore avoids to select wrong situations or too difficult tasks.

There are many causes which make a person test anxious. The individual history of success and failure combined with an unfavorable attributional style (Wine, 1980) and no supportive feedback from parents, teachers and peers may lead to a vicious circle which develops a proneness to scan the environment for potential dangers ("sensitizing"), to appraise demands as threatening and to cope with problems in a maladaptive way.

The assessment of test anxiety has to consider these theoretical advances and, therefore, requires measures for separate components. Such a satisfactory measure for example is the Test Anxiety Inventory (TAI) by Spielberger (1980) which is now available in several languages (see Spielberger & Diaz-Guerrero 1976, 1982, 1984). Another new instrument, called "Reactions to Tests", is introduced by I. Sarason (1984). Advances in research and assessment are published annually by the International Society for Test Anxiety Research (Schwarzer et al. 1982; Ploeg et al. 1983, 1984).

Social Anxiety. Social anxiety can be defined as consisting of (1) negative self-evaluations, (2) feelings of tension and discomfort, and (3) a tendency to withdraw - in the presence of others. This is a pattern of cognitive, emotional and instrumental variables which may occur simultaneously, but need not. Shyness, embarrassment, shame and audience anxiety are different kinds of social anxiety. Shyness is a general social anxiety applicable to a variety of social situations. Embarrassment can be seen as an extreme state of shyness indicated by blushing. Shame occurs when one sees himself as being responsible for negative outcomes or for failing in public. Audience anxiety is characterized by a discomfort when performing in front of an audience (stage fright) which can lead to an inhibition of speech. This is closely related to test anxiety because the individual is afraid of being under the scrutiny of others. Both kinds of apprehension in face of tests and social interactions share this aspect of evaluation anxiety (Wine, 1980). Social anxiety is more general, whereas test anxiety can be conceived of as very specific with respect to written exams. In the case of oral exams and any other tests performed in public, test anxiety as well as social anxiety are adequate variables to be taken into account. Test anxiety researchers have usually neglected this social aspect or have defined test anxiety in a manner too broad to be of use.

Whether social anxiety can be subdivided into these four emotions has not been finally agreed on. There may be more or less facets. Buss (1980) has made this differentiation popular, but now undertakes a conceptual change by conceiving embarrassment as part of shyness (Buss, 1984). Some authors don't make any distinction at all and prefer to accept social anxiety as one homogeneous phenomenon. In contrast, Schlenker and Leary (1982) conceive shyness and embarrassment as separate facets of social anxiety. This question requires further theoretical efforts (see Asendorpf, this volume). It is

useful to distinguish state shyness from trait shyness in accord with the widely accepted conceptualization of state and trait anxiety (Spielberger, 1966). The state of anxiety refers to the acute feeling in the process of emotional experiencing. The trait of anxiety refers to a proneness to respond with state anxiety in threatening situations. This proneness is acquired during the individual's history of socialization. Shyness is characterized by: public self-awareness, the relative absence of an expected social behavior, discomfort in social situations, an inhibition of adequate interpersonal actions, and awkwardness in the presence of others. Buss (1980) claims that public self-awareness is a necessary condition of any kind of social anxiety. In this emotional state the person directs his focus of attention to those aspects of the self which can be observed by others, like face, body, clothes, gestures, speech or manners. At the trait level public self-consciousness is the respective variable. Persons high in public self-consciousness are prone to perceive themselves as a social object and tend to think and act in front of an imaginary audience. The direction of attention to the self can be understood as a mental withdrawal from the social situation at hand, leading to a decrement in social performance. Self-related cognitions are part of the complex emotional phenomenon of shyness or social anxiety in general.

The anxious individual worries about his social performance, is concerned with his public image, perceives inability to cope with social demands, is apprehensive to behave inadequately, permanently monitors and evaluates his actions and is preoccupied with himself as a social being. The emotional component refers to the feelings of distress, discomfort, tension and the perception of one's autonomic reactions in the presence of others. For example, blushing when experiencing embarrassment is a source of information which can lead to a vicious circle (Asendorpf, this volume). The "emotional component" can be seen as a "quasi-cognitive component" because it deals with information processing on feelings and arousal. Finally, the instrumental or action component refers to awkwardness, reticence, inhibition of gestures and speech, a tendency to withdraw from the situation, and the desorganization or absence of social behavior. Both shy and polite people can be very similar in behavior but differ in cognitions and feelings: non-shy, polite individuals are relaxed, calm and direct their attention to the situation, whereas shy individuals do not.

Causes of shyness can be theorized in different ways. Schlenker and Leary (1982) propose a self-presentational view: Shyness occurs when someone desires to make a favorable impression on others but is doubtful of the desired effect. Embarrassment occurs when something happens which repudiates the intended impression management. There may be a discrepancy between one's own standard of self-presentation and one's actual self-presentation. When such a discrepancy is expected, shyness will result, and when it is actually perceived,

embarrassment is experienced. This can be seen as a two-stage process at the state level of social anxiety. A person who expects falling short in impressing others will be shy. If this anticipation becomes true, the person is embarrassed. Buss (1984) mentions a number of other potential causes for shyness, such as feeling conspicuous, receiving too much or too little attention from others, being evaluated, fear of being rejected, a breach of privacy, intrusiveness, formality of social situations, social novelty etc. With respect to common stress theories social anxiety depends on the appraisal of the social situation as being ego-threatening and the appraisal of one's own inability to cope with it.

The development of shyness can be traced back to two sources (Buss, 1984). The "early developing shyness" appears in the first year of life and is better known as stranger anxiety or wariness. Novelty, intrusion and fear of rejection are the immediate causes. Since there are no self-related cognitions at that time, this is a fearful shyness, whereas the "later developing shyness" can be regarded as a self-conscious shyness. It first appears in the fourth or fifth year of life and is associated with acute self-awareness and embarrassment. Both kinds of shyness contribute to the complex phenomenon of shyness during the individual socialization process. Fearfulness as an inherited trait and public self-consciousness as an environmental trait may be two sources of trait shyness, which attains its peak degree during adolescence (Buss, 1984). Low self-esteem and low sociability may be two additional causes. In a field study with 94 college students, we obtained satisfactory correlations between shyness and self-consciousness (.39), audience anxiety (.39), general anxiety (.36), other-directedness (.36) and self-esteem (-.62) (Schwarzer, 1981). These may be rough indicators of trait associations.

Other findings show that shyness is negatively correlated with number of friends, frequency of social activities, closeness to others, social satisfaction, self-disclosure to friends, dating frequency, dating satisfaction (Jones & Briggs, this volume). The data suggest that the inhibitory effect may be greater for males than for females. Shyness can be regarded as inhibition, tension, and anxiety preoccupation in the presence of an audience. Shy people tend to be less friendly, outgoing, warm and talkative. Other indicators of shyness are identified as self-consciousness, loneliness, communication apprehension, and feeling inadequate with superiors. One possible cause for shyness may lie in a more accurate memory for negative feedback from social sources. Shy people may have a reduced capacity to gather and to correctly process social feedback.

There are few measures designed to assess trait social anxiety. In analogy to test anxiety research, separate worry and emotionality scales have been constructed (Morris et al. 1981). However, these scales do not distinguish shyness from embarrassment, shame and audience anxiety. On the other hand, the specific shyness scale of Cheek and Buss (1981) does not provide a separation of cognitive and emotional components.

Evidently there is a lack of operationalization compared to the obvious increment in theoretical efforts during the last years. A complex measure of social anxiety which satisfies the needs of the present approach should consider the four kinds of social anxiety and the state-trait distinction as well as the three components (cognitive, emotional and behavioral), and also provide as many subscales. The distinction between a cognitive and an emotional component bears treatment implications: Self-related cognitions could be modified by a restructuring and attention training, whereas tension and nervous feelings could be treated by systematic desensitization.

STRESS

Cognitive appraisals. Stress research is no longer directed either to environmental stressors on the one hand or to personality dispositions on the other. Instead, stress is regarded as a complex phenomenon which occurs and develops in the person-environment process (Lazarus & Launier, 1978). Cognitive appraisals are key factors in the emergence and experience of stress. First, an encounter is evaluated as irrelevant, as benign-positive or as stressful. Those stimuli which are felt to be stressful are further appraised as challenging, threatening or harmful. Challenge refers to the potential for mastery, personal growth or positive gain. Threat refers to the anticipation of danger, and harm or loss refer to injuries which have already occurred. The person processes information about the environmental demands: He constructs a cognitive 'situation model' (Schwarzer 1981). This has been called 'event appraisal' or 'primary appraisal' (Lazarus).

While being confronted with a stressful encounter the individual also constructs a cognitive 'self model' as a potential response to the 'situation model'. This has been called 'resource appraisal' or 'secondary appraisal' (Lazarus) not implying a temporal order. The person checks his material, social, physical and intellectual resources required for overcoming the situation at hand. When the ongoing action is interrupted by a stressful encounter the focus of attention shifts to the self making those aspects salient which are relevant for dealing with the encounter efficiently (Carver & Scheier, 1984). One's coping competence or self-efficacy or one's external resources are under scrutiny. There is a rather stable body of knowledge about one's resources but in stressful encounters the person becomes more aware of it than usual. The 'self model' contains cognitions about the subjective availability of appropriate actions or action scripts, that is a set of expectancies and adaptive routines for a variety of demanding situations. Believing to be competent or invulnerable is rather general, therefore such a

cognitive 'self model' partly determines which situations are selected, which actions are chosen, how much effort is exerted or how long one persists. If a specific 'situation model' taxes or exceeds one's specific 'self model' the specific person-environment transaction is experienced as stressful. Persons with a weak 'self model' are highly vulnerable towards environmental demands and are prone to get in trouble.

Coping. The process of coping is the more or less adaptive response to both kinds of appraisals. The individual strives to regain the predominance of the 'self model' over the 'situation model'. Coping can be more problem-centered or more emotion-centered (Lazarus 1980): The person may direct his efforts to the problem which causes the inconvenience or he may focus on his emotions trying to cool out the arousal or to regulate self-cognitions (palliative coping). Four coping modalities have been stated: Information search, direct action, suppression of action and intrapsychic coping (Lazarus & Launier 1978). Information search leads to a different view of the situation and implies reappraisals. Direct action is an attempt to control the environment. Suppression of action is adaptive when any impulsive action would cause more harm and when waiting patiently is successful as it is in the 'delay of gratification paradigm' (see Toner, this volume). Intrapsychic coping addresses reappraisals and other internal processes like denial, reattribution or self-serving cognitions. Further influential variables in the coping context are the degree of uncertainty or unpredictability of the event, its level of threat, the existence of conflict, and the perception of helplessness or vulnerability.

Critical life events. Recently, research on stress and coping has turned to observations in natural settings and has focused on the experience of life events (see Filipp, Aymanns & Braukmann, 1984). Different kinds of life events are distinguished from each other: 'Normative' events occur to a majority of people in a certain age or time period like exams, marriage, birth of offspring, death of parents or other close persons, and transitions in the professional career. 'Nonnormative' events are less predictable and happen to a limited number of people, like accidents, earthquake, disease, joblessness, divorce, conflicts and tension. Minor chronic problems are the 'daily hassles' which also may cause severe stress in the long run. Preventive actions can be aimed at developing coping competence for a variety of encounters. However, prevention seems to be limited to normative events. In any case, a generally strong 'self model' would be supportive whereas vulnerable individuals have to suffer more from daily hassles. Four or more dimensions can be distinguished with respect to the content of life events: loss and separation (death or severe illness in the immediate family, divorce), autonomy and intimacy (tension with a loved one, arguments with the boss, peer pressure, religious problems), academic pressure (amount of homework, anticipated failure of an exam, work load, deadlines), and financial obligations (lack of money, paying bills, job search, installment loans). Life events can be very

stressful and are accompanied by emotions like anger, anxiety, grief, depression and by health problems like sleeping and eating disorders which impair the readjustment process. On the other hand, successful coping with these encounters are followed by personal growth. The individual acquires skills and strategies and experiences an enrichment of the self.

Social support. One protective factor can be seen in the availability of other people and the potential support by them (see B. Sarason, 1984). It is part of one's resources or 'self model' and serves as a buffer against stress. The development and maintenance of such a social network can be influenced by situational and by personality factors. Moving to another place or the loss of a relationship would be situational factors whereas sociability or social anxiety are dispositional factors of influence. Social networks do not explain psychological outcomes but the closeness and by this the frequency and intimacy of social exchange or the involved activities are causal determinants. Three fundamental types of social exchange can be distinguished. (1) Help. A helping significant other can provide tangible support (material aid), appraisal support or emotional support. Help functions in reducing stress or threats to well-being, and the outcomes are feelings of less stress and a higher quality of coping. (2) Companionship and intimacy. These serve no direct and instrumental function but involve activities which people enjoy like shared leisure, discussion of common interests, affection, humor, self disclosure etc. Social ties have a beneficial function. They provide a positive input to well-being and to self-esteem by giving pleasure and stimulation. The affected outcomes are satisfaction, happiness, quality of life and less boredom, loneliness, sadness and depression. (3) Behavior regulation. People experience feedback and modeling in the conduct of life by roommates, colleagues and other close persons. They learn to comply with social norms or rules like traffic rules, seatbelt use, alcohol and cigarette consumption, dental care, formal interactions, shopping and other daily life activities by receiving feedback and by observing models. Their role behavior and social performance in general are prompted by significant others. Outcomes of this are structural inputs to daily affairs. Due to a lack of prompting, people living by themselves behave differently than those living in a social network due to a lack of prompting.

Generally, social support is regarded as a buffer against stress. However, the topic is broader and more complex. It is necessary to ask for the adaptational value of social contexts or for the impact of social relationships on coping efficiency. The social environment is part of the environmental demands to be appraised as subjectively relevant. If relevant, the social environment can be appraised as stressful or as benign-positive. The first one turns out to be social stress and the second one to be social support. The pure existence of a social network is not supportive per se. If a person is already stressed by another event, she or he will probably perceive offered help as social support.