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THE CONSTRUCTION OF A SCALE TO MEASURE CONFLICT OVER EXPRESSING  
EMOTION: THE AMBIVALENCE OVER EXPRESSION QUESTIONNAIRE

By

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A THESIS

Submitted to  
Michigan State University  
in partial requirements  
for the degree of

MASTER OF ARTS

Department of Psychology

1989

5563494

# ABSTRACT

## THE CONSTRUCTION OF A SCALE TO MEASURE CONFLICT OVER EXPRESSING EMOTION: THE AMBIVALENCE OVER EXPRESSION QUESTIONNAIRE

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Two studies examined the importance of ambivalence about expressing emotion. A questionnaire measure of ambivalence over expression (AEQ) was designed and administered to 292 subjects along with the Emotional Expressiveness Questionnaire (EEQ), measures of social desirability and intense ambivalence. Factor analysis of the AEQ indicated that it is unidimensional. The AEQ was negatively correlated with the EEQ and social desirability, and positively correlated with intense ambivalence. Women scored significantly higher than men on both the AEQ and the EEQ. A second sample of 48 subjects participated in a 21-day study of mood and health. Expressiveness was positively correlated with some measures of well-being and with daily negative affect. The AEQ was positively correlated with a several indices of psychological distress. Neither the EEQ nor the AEQ was correlated with daily symptom reports or number of different illnesses. Results support the contention that expressiveness is no insulation against the adverse consequences traditionally associated with inexpressiveness.

Dedicated to my parents, Robert C. and Ida S. King

## ACKNOWLEDGMENTS

The author expresses gratitude to the members of my committee, Dr.'s Joel Aronoff and Susan Frank for their helpful comments on this research. Very special thanks to Dr. Robert Emmons for his assistance on this thesis and his continuing support of my career as a researcher.

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## INTRODUCTION

Shields has commented that "as a culture we are ambivalent about emotion (1987, p. 231)." This cultural ambivalence is apparent in many common expressions which subtly denigrate emotion and emotional display. Expression of emotion is commonly termed a "giving in" to passion. We comment that disaster is avoided when "cooler heads prevail". Mistakes occur when sentimentality rules and we think with "our hearts instead of our heads". Hochschild (1983) has concluded that emotion is often portrayed as an impediment to societal progress. Along side this implicit disdain for emotion are societal expectations for and encouragement of the expression of emotion as well as the assumption that emotions must be "let out". There is a belief that expression is the healthy end to emotional response. One must be "in touch" with one's true feelings, and "follow one's heart." This equivocal cultural view is of particular significance to psychology, for this ambivalence impinges on a microcosmic level of experience.

Emotion and emotional expression are issues which pervade many aspects of human experience. The emotional life of an individual is obviously important to his or her psychological well-being. Emotion and expression also contribute to physical well-being (e.g., for example, Derogatis, Abeloff, and Melisaratos, 1979) and have social implications as well (e.g., Tavis, 1984).

While popular emphasis on expression may be dwindling somewhat, the assumption lingers that expression provides an insulation against

psychological and physical ailment. One must let one's feelings out or bear the brunt of a neurosis or an ulcer: emotions will find expression, one way or another. Freudian repression is an example of the early bias towards expression for its own sake. Freud (1917/1977) portrayed repressed impulses as constantly pushing for expression. According to Freud, impulses would eventually find a means to manifest themselves either in their actual content or in neurotic symptoms. "Catharsis" was the means by which this emotional energy could be released. Later psychotherapeutic techniques have also emphasized the importance of abreactive experiences (e.g., Rogers, 1961). In these techniques we can see the implicit assumption that emotions must be ventilated in order to release pent up energy.

Although Freud emphasized the psychological ills that could be visited upon repressive individuals, current assumptions about the benefits of expression emphasize the adverse physical consequences of inhibition. The acknowledgment of the relationship between mind and body has led to the assertion that inhibited emotions need not be expressed through mental illness. Instead, such impulses can find release in the autonomic nervous system and in various psychosomatic disorders. The inverse relationship between emotional expression and autonomic activity, which has been supported to some extent by research to be reviewed later, represents a return to Freud's homeostatic model of emotion, substituting psychosomatic illness for neurosis.

This tension-release view of emotion, while it is implicit in many common assumptions about expression, is certainly ripe for criticism, ignoring as it does, individual differences in expressiveness styles and the social functions and implications of emotional expression.

Both the Freudian concept of repression and the more recently proposed connection between emotional expression and physical illness, emphasize an inevitability of expression that we are beginning to realize was and is unwarranted. It may be that some individuals can be inexpressive without suffering any adverse consequences (Pennebaker, 1985). In addition, the nature of emotional "energy," itself, may differ across individuals with regard to tendencies to feel intense emotion (Larsen & Diener, 1987), to engage in different kinds of emotional control (Roger & Nesselroever, 1987) as well as to express or inhibit emotion (Bell, 1978). Also, as we shall see later in this discussion, physical symptoms have been associated with both inhibition and overt expression (e.g., Friedman, Hall and Harris, 1984).

An examination of emotional expression from a sociologically informed perspective (e.g., Hochschild, 1983; Baumeister & Cooper, 1981) reveals that expression is a complex task. Kluckhohn and Murray (1953) commented that "the most difficult and painful function of personality (is) that of accommodating its expressions, needs, choice of goal-objects, methods, and time-programs to the patterns that are conventionally sanctioned by society (p. 19)." Each individual functions within his or her own individually determined constraints which are themselves the product of and which exist within larger social norms. To assume a felt emotion must or should be expressed is to ignore thousands of years of evolution for our species, hundreds of years of civilization for our society, and tens of years of socialization for each individual.

The crux of the following argument is that there are factors that intervene between emotion states and emotional expression which may

influence the potentially pathogenic quality of inexpressiveness. These factors include individuals' choices about whether or not an emotion should be expressed. These choices will be influenced by individual styles as well as social expectations regarding emotional expression. The following discussion and investigation will examine the issue of emotional expression apart from the assumption that expression of emotion is always a positive action. Our emphasis will be not on expression per se but rather upon individual expressiveness styles: social evaluation of and individual comfort within these styles and their implications for psychological and physical well-being. Two concepts which are essential to the present investigation are personal strivings and display rules.

Emmons (1986) has described the role of "personal strivings" in personality and subjective well-being. A personal striving refers to "what a person is characteristically trying to do" (1986, p. 1059). Emmons has found that ambivalence about one's strivings is associated with low subjective well-being, especially high negative affect. He has suggested that a preponderance of his subjects' ambivalent personal strivings, i.e., those strivings whose achievement would cause unhappiness as well as happiness, concerned emotion management. Ambivalence over those strivings which deal with emotions is suggested here as an important factor in the relationship that has been demonstrated to exist between emotional expression and well-being. Personal strivings are particularly suitable for a study of ambivalence over expression since what a person strives to do may be very different from what a person actually does (Emmons, 1986). Within this framework, we can examine the relationship of ambivalence about

expression apart from the basic issue of expression itself. Meehl (1964, p. 10) defined intense ambivalence as "the existence of simultaneous or rapidly interchangeable positive and negative feelings toward the same object or activity, with the added proviso that both the positive and negative feelings be strong." Ambivalence can also be thought of as an approach-avoidance conflict--wanting something but at the same time not wanting it. With regard to personal strivings, individuals may have goals about emotional expression and be ambivalent about these goals--to wish to achieve them while at the same time acknowledging that achievement implies negative as well as positive consequences.

It may be only fitting that expressiveness be examined through a goal framework, as Baumeister and Tice (1987) state that emotions are concerned with the same goals as the self. Emotions are a gauge of our progress in our goal pursuits. We feel anger, joy, etc., in response to the frustration or fulfillment of our desires. Not only do emotions and emotional expression arise out of goals, emotion and expression can be used in the service of goals as well. Personal strivings which pertain to emotion reveal much about the nature of individual emotion management. Examples of emotion-related personal strivings collected in a study by Emmons and King (1988) include, "control my temper," "be in touch with my feelings," "always appear cool," "not let my emotions take over," "hold my feelings in if they will hurt others," "always wear a smile on my face," "be honest and open about my feelings," "let my anger out before it all builds up inside me," and "learn to express my love toward my family better." The juxtaposition of these strivings

provides a pointed demonstration of the translation of cultural ambivalence into individual lives. Evident in these strivings is the knowledge that emotion must be controlled, that expression implies vulnerability but also that emotion should be honestly expressed. These strivings exemplify the fact that individuals possess expressiveness goals and seek to achieve certain ends through their expressive behavior. We will posit that expression is a motivated human behavior and that it has recognized purposes in human interaction. We will propose that it may not be as harmful for an individual to forego the expression of an emotion as it is for the individual to feel pressure from others to express when they do not really wish to do so.

Also central to this discussion is the concept of "display rules". These are the implicit and explicit rules that govern emotionally expressive behaviors. Display rules have been defined by different authors as both personally and culturally determined and defined (Lewis & Michalson, 1985; Malatesta & Haviland, 1982), gender related (Malatesta & Haviland, Hochschild, 1974; Shields, 1987), governing deception, drama, simulation, and masking of expression (Shennum & Bugental, 1982; Lewis & Michalson, 1985). The influence of display rules is apparent in some of the personal strivings mentioned earlier. Our knowledge of and confidence about these rules, their applicability, clarity, or ambiguity, as well as the extent to which our goals conflict with these rules are crucial to ambivalence over expression and, therefore, to the relationship between health and expression. Murray (1938) characterized development into adulthood as a process of learning these societal rules. The individual "must learn

to inhibit or redirect certain impulses, temporarily or permanently, as well as learn to force him (or her) self to perform certain other actions which at the time are repugnant to his (or her) feelings (p. 20)." Constant failure to conform with display rules could lead to social censure and foster ambivalence. Constantly striving to meet these rules, with little or no regard for one's genuine emotional state could lead to ambivalence as well.

A final concern that deserves to be addressed here is the reasons why expression of emotion is particularly likely to be fraught with ambivalence. Why should individuals wish to express their emotion and yet simultaneously not wish to express? First, Baumeister and Tice (1987) have commented that the subjective feeling state that comprises an emotion includes a motivation to express. This desire to express, coupled with beliefs that expression is necessary for psychological and physical well-being would dictate expression. At the same time, the expression of emotion entails self-disclosure. The same sorts of conflicts and vulnerabilities which are inherent in the process of self-disclosure are also a part of emotional expression. Emotional expression requires the risk of intimacy. Concerns over intimacy are common in our culture (McAdams, 1985). McAdams has commented that individuals are often ambivalent about becoming intimate with others--that often it is those individuals who crave intimate relationships who also fear such involvements. Emotional expression requires that we allow others to see that side of us which is less than civilized, a side which has been denigrated both by our culture and our science (as later discussion will reveal). Individuals are faced with a dilemma. On the one hand expression is presented as healthy and

favorable and on the other it is portrayed as a sign of weakness.

In order to examine the role of ambivalence over expression in psychological and physical well-being, a questionnaire was created out of the personal strivings collected previously by Emmons (1986). This questionnaire was administered along with a measure of expressiveness to a group of subjects. These data were used in a factor analysis of these scales. In a second study, the questionnaire measure of ambivalence over expression was administered along with measures of expressiveness to a second groups of subjects from whom well-being information was also gathered. Thus, the two studies to be reported here will address the contributions of ambivalence over expression and expressiveness to psychological and physical well-being. The central thesis of this research is that expression is, in fact, of little importance to well-being. One can be expressive or inexpressive of emotion and be healthy. Expressive behaviors themselves will not predict well-being. Rather, from the current perspective, it is ambivalence about one's expressiveness style that fosters ill-being.

The relationship between ambivalence over expression and inhibition that is implied by this model is important. A point that will be made repeatedly throughout this investigation is that individuals may be inexpressive without being inhibited. Ambivalent and inexpressive individuals are likely to be confused by a model that stresses the importance of expression, per se. Emmons and King (1988) found that it is those goals about which an individual is ambivalent upon which he or she is unlikely to act. Thus, ambivalent individuals may be likely to be inexpressive, however these individuals will not be distinguished from healthy inexpressive individuals via measures of



expressiveness alone. Before discussing the actual construction and test of the Ambivalence over Expressiveness Questionnaire it may be helpful to review some of the basic issues of emotion research, emphasizing throughout points at which ambivalence may play an important role in expression management.

### Traditional Views of Emotion and Expression

Generally speaking, historically, emotional expression has not been viewed in a positive light. It has been portrayed as primitive and uncivilized. Only relatively recently has its value been acknowledged by researchers and theorists. Hochschild (1985) has categorized theorists in emotional expression into two groups: "organismic" vs. "interactive." Darwin, Freud and James, (although he seems to fit this category less clearly) are placed in the former category by Hochschild while sociologists such as Goffman and Hochschild herself would fit into the latter category. Organismic thinkers stress the basic fixity of emotions—the universality of emotions and expressions. They view management and assessment as extrinsic to the felt emotion itself.

Darwin is often cited as the founder of research in emotional expression (Montgomery, 1985). According to Darwin (1872) emotional expressions are actions which occur whenever specific states of mind are induced. Thus, emotion and expression were presented by Darwin as basically inseparable. He presented the inhibition of emotional expression as essentially imperfect, stressing that even behaviors undertaken to suppress expression are themselves expressive and revealing. It may come as a surprise to readers of The Origin of Species that in The Expression of the Emotions in Man and Animals

(1872), Darwin did not present emotional expression as directly adaptive for human beings and that, in this volume, he resorted to Lamarckian use-inheritance to justify the existence of "universal" (see Ekman and Friesen, 1971) facial expressions. In his principle of "serviceable associated habits," Darwin suggested that emotional expressions arose out of the inheritance of acquired characteristics. While he viewed animal expressions as adaptive and communicative, human expressions, like vestigial organs left by generations long past, were seen by Darwin as acts which occur "...though they may not...be of the least use (p. 28)." Darwin rejected the idea that there could exist some design behind human expression (Montgomery, 1985). Darwin explained the existence of expressions as physiological imitations of the actions that would occur if we were still primitive people.

Janet and Sartre also came out of an organismic view of emotional expression and represent further the view of emotional expression as an uncivilized phenomenon. Janet viewed emotional reactions as a "disorder" (Sartre, 1948). Sartre (1948) viewed emotional reactions not as pure disorder but rather as a form of "lesser adaptation". Emotional expressions, particularly expressions of negative emotions, for Sartre, involved a "falling back" on primitive mechanisms. However, Sartre recognized that these primitive mechanisms serve a specific purpose. He maintained that emotional displays are a form of primary process coping—a means by which the self can be lowered in order to meet needs at a lower level. Thus, even within an organismic perspective, Sartre portrayed emotional expression as an ersatz means to an end.

In contrast to the organismic view, the interactive view of

emotional expression stresses that expressions are a product of biology and psychology. The interactionists acknowledge that management impacts upon and shapes the feeling itself. From an interactionist's perspective, emotion management entails the creation of experience. Within the interactive perspective, the inner state of emotion is as susceptible to social forces as the external expression of emotion.

#### Emotion and Expression: A Dynamic Interaction

Intuitively, the relationship between emotion and emotional response may seem a simple one—one feels an emotion and expresses it. However, a plethora of research has proven this uncomplicated instance of emotional response to be far from the rule. In fact, many factors are involved in the relationship between an emotion state or feeling (these terms will be used interchangeably in the present investigation and discussion) and overt emotional displays. As our understanding of the relationship between feeling state and expression has increased, so has our appreciation of its complexity. For Darwin, emotion and display were inseparable. A felt emotion was expressed. This basic tenet, that an inner feeling leads to a particular emotional display, has been challenged by theory and research indicating that the act of expression impacts significantly upon the quality of emotional experience. The impact of expressive behavior on emotional experience is relevant to a discussion of ambivalence over expression to the extent that individuals are aware of this impact and utilize it in the domains of emotion and impression management.

James (1884) suggested that human emotional experience was the perception of the bodily changes which occur in response to a stimulus. According to James, there was no emotion except that which

found expression, or more accurately, that which could be found in expression: "A purely disembodied human emotion is a nonentity (p. 194)." According to James' theory, each emotion possesses a particular set of skeletal muscle movements which informs the individual of the quality of a particular emotion. Thus, within this perspective, emotions themselves are inferences based on perceived bodily changes and our own cognitions about what is appropriate to a particular situation. Although James was placed in the category of "organismic theorist" by Hochschild, we will introduce our discussion of the interactionist view with an overview of his theory. James might be considered an organismic thinker insofar as he assumed that each emotion possessed a fixed set of skeletal muscle movements which provoked the attribution of the specific emotion. Still, to his credit James recognized the intimate interaction of emotion, physiology, and emotional expression, or, in his words "how much our mental life is knit up with our corporeal frame (p. 201)." According to James, not only does the internal subjective emotional state impact on overt behavior but these behaviors actually define emotional experience.

Buck (1984) has suggested that, "the skeletal muscle activity associated with emotional expression plays a direct role in regulating emotional processes (p. 48)." This connection was not missed by James, himself. In addition to the many titles allotted to him in psychology, James might also be dubbed the father of emotion management, for, as an extension of his basic idea, James proscribed certain behaviors which were intended to assist an individual in avoiding negative affect and maximizing positive affect. Specifically, James maintained that if we would refuse to express our emotions they would eventually dissipate.

In addition, James held that posing positive emotions would conquer negative moods. In short, James surmised that the manifest expression of an emotion could produce that emotion. Nearly a century later, fascinating research by Laird, Lanzetta and others supported James' intuitions about the importance of expressive behaviors to emotional experience.

Laird (1974) asked subjects to perform various facial contortions which were designed to match emotional expressions of smiling and frowning. Subjects' subjective emotional experience mirrored these manipulated facial expressions. While smiling, subjects reported themselves to feel happier and while frowning, they reported more negative mood. Lanzetta, Cartwright-Smith and Kleck (1976) instructed subjects to disguise or exaggerate their reactions to an anticipated shock. When hiding their reaction to the shock, subjects showed reduced skin conductance (i.e., lowered arousal) and reported the shock to be less painful relative to the condition in which they exaggerated their reactions. More recently, McCanne and Anderson (1987) reported that subjects who suppressed smiles while thinking of positive scenes reported less enjoyment and more distress than when permitted to accompany their thoughts with congruent facial expression. Thus, expressive behaviors can create, enhance, or mitigate emotion states .

Recently, the results of studies such as Laird's have been criticized on methodological bases. Matsumoto (1987) performed a meta-analysis on these expression manipulation studies and concluded that the actual effect size for expression manipulation was only small to moderate. Even so, Matsumoto maintains that it is important to improve these studies methodologically, in order to examine the

contribution of different components of expression on emotional experience. It is important that the expression manipulation studies have been criticized on methodological (vs. theoretical) grounds. Certainly, the results of these studies are intuitively appealing and stand the test of daily life. We recognize that we do manage emotion by posing expressions. Indeed, the importance of expression to subjective emotional experience apparently is recognized even by children.

Cole (1985) reports that children are capable of posing happy expressions at a young age but that the ability to pose sad or angry expressions depends on developmental change. Anecdotally, Cole observed that children were often reluctant to pose negative expressions. These children would state that they were reluctant to pose sad faces because they did not "want to feel sad." This evidence, while only anecdotal, does suggest that children know that they can pose negative expressions but only at the cost of feeling the concomitant negative emotions.

This research has important implications with regard to ambivalence over emotional expression. Inhibition of emotion can have deleterious effects on emotional experience in that it may diminish one's experience of positive emotion. However, this research would also suggest that, contrary to popular assumption, inhibition is not always a bad thing. Indeed, inhibition of emotion and even dissembling emotion can be viewed in this context as a tool for emotion management (see Sackheim, 1983). Despite the usefulness of deception as a legitimate means of emotion management, there is potential for individuals to perceive themselves as dishonest when dissembling. This

could lead to guilt and ambivalence. It is regrettable that little research has been done in this area.

Thus, the "causal arrow" between emotion and expression may be double-sided. The relationship between state and display can be conceptualized as an interaction. This interactive relationship does not exist in a vacuum, however, and is itself a product of another interactive relationship: "The emotional expression-emotional state relationship is a function of the interaction between biological and environmental factors (Lewis & Michalson, 1985, p. 166)." Certainly no emotional display occurs without social influences impinging, either on the form of the display or its subsequent reinforcement.

#### Expression: A Social Issue

The recognition of emotion as a social issue has brought a new legitimacy to this facet of human experience. Baumeister and Tice (1987) suggest that it is difficult, if not impossible to justify the adaptive existence of emotional expression on an individual level. However, with regard to the continued existence of a social group, emotional expression can be viewed as useful and adaptive. Emotional expression plays a key role in group cohesion, communication, and loyalty (Baumeister & Tice). As early as 1924, Allport recognized the social significance of emotional expression and appended Darwin's conception of emotional expression taking into account the purposive, motivated nature of expression. Allport maintained that although expressive behaviors may not have been originally purposive or communicative they have become so. According to Allport, emotional expression is not a product of physiological similarity but of social context. The validity of Allport's assertions is demonstrated everyday

in human interaction. We expect certain expressions from others and we know that we are subject to social expressiveness expectations as well. Evidence of this awareness is provided in the individual strivings that subjects have listed in our investigations. Further evidence for Allport's prophetic statements is provided by Baumeister and Cooper (1981), who found that the public expectation of emotion can cause that emotion. Subjects who were told that, based on some criterion of past behavior, they were expected to be embarrassed and anxious about singing in public were more embarrassed and anxious than those who had not been primed in this way.

#### The Socialization of Expression

The socialization of expression has been characterized as the process of gradually separating emotion state from expressive behaviors, the asynchronization of feeling and display (Cole, 1985; Hinde, 1985; Lewis & Michalson, 1985; Malatesta, 1985; Hochschild, 1983; Jones, 1935). Lewis & Michalson trace the development of facial expression from sign (i.e., an innately meaningful expression, bearing an isomorphic relationship to a feeling state) to symbol (i.e., an arbitrary expression whose meaning is individually and socially determined). Lewis and Michalson have found that most two-year olds are capable of producing positive and negative expressions at will—wholly apart from their subjective feeling state. By age 3, children are aware of display rules and are able to match appropriate expressions with a variety of situations (Lewis & Michalson, 1985). In his early studies with children, Jones found that the older subjects showed less emotional display and greater gsr response to emotion-provoking stimuli. Jones suggested this as evidence for the



socialization of internalizing emotions rather than displaying them. Jones termed this phenomenon "learned inhibition."

According to Field (1982), development brings an increased capacity for expressive control. Children learn to produce a variety of expressions apart from feeling states and to inhibit expressions concomitant with certain feeling states. Field poses an interesting question as to the ultimate implication of the learning of emotional control. We do not know if more self-management actually results from this training or if, instead children acquire a greater range of expressive freedom. Perhaps the result of the socialization of emotional expression is flexibility. This would allow children to become adults capable of using their expressive skills to their own advantage in interactions with others. These skills could also allow individuals to avoid embarrassment and vulnerability. In addition, skills in emotion management could prove useful in the workplace.

Emotion management has become an acknowledged commodity in the marketplace. Hochschild (1983) studied stewardesses on the job and in training programs. Not surprisingly, she found that much of the training that they received involved the management of emotional display. Stewardesses are trained in complicated tactics for dealing with their genuine emotional responses. Obviously, this sort of commercialization of emotional display occurs rather routinely in our society. Unfortunately, because of the foregoing discussion we can see that artificial management of emotion can actually impact upon experience. Hochschild suggests that this kind of pressure on the job can result in the alienation of individuals from their own emotional experience. This kind of sale of affect display could be a source of

ambivalence over expression.

### Emotional Expression and Arousal: An Inverse Relationship

Emotional response may not only be vital to emotional and social experience but to physical well-being as well. Physiological arousal is an obvious and acknowledged component of emotion. The relationship between emotional expression and physiological arousal has provided the foundation for many of our assumptions about the link between expressiveness and illness. Ultimately, this relationship may prove important to the link between ambivalence over expression and ill-being.

Inhibition of emotional expression has been associated with psychosomatic symptoms and low levels of subjective well-being (Pennebaker, 1985). Many of our assumptions about the advantages of emotional expression are based on the inverse relationship between emotional expression and autonomic reactivity which has been supported by research (Buck, 1985). This inverse relationship is perhaps most familiar to us as the basis for lie detector tests—not telling the truth causes an increase in galvanic skin response (gsr). Jones (1935) found that when an emotion is expressed, even when it is expressed intensely, there may be no change in arousal. Hokanson and Shetler (1961) and Hokanson and Burgess (1962) found that the expression of aggression was associated with lower arousal levels than the inhibition of such expression. Blocking aggressive impulses toward a frustrator resulted in increased physiological arousal, including increased heart rate and blood pressure (Hokanson and Shetler, 1961). Thus, typically, the inhibition of emotional expression has been associated with an increase in autonomic activity (Pennebaker, 1985). Expression of

emotion permits arousal levels to return to baseline. In this sense, emotional expression can be seen as a safety valve (Anderson, 1981).

The inverse relationship between emotional expression and autonomic reactivity has been translated into an individual difference characteristic, as research has revealed that some people, termed externalizers, characteristically express their emotions overtly while others, internalizers, typically react autonomically to emotional stimuli. Notarius and Levenson (1979) identified natural externalizers and internalizers by observing their reactions to an emotion-provoking film. Subjects were divided into the categories of externalizers and internalizers by their consistent modes of reactions to the film. Internalizers characteristically responded autonomically to the film while externalizers tended to change their facial expressions and had little autonomic reaction to the film. In a later threatening situation, externalizers exhibited more facial response while internalizers showed more autonomic arousal. Notarius and Levenson found that externalizers were generally less physiologically reactive than internalizers and that there were baseline differences between the two groups. The distinction between externalizers and internalizers has been associated with other personality differences as well. Externalizers have been found to be more extraverted, to have higher self-esteem and to be more accurate senders of emotional messages than internalizers (Buck, 1984).

Field (1982) filmed infant facial expressions and found that the externalizer-internalizer distinction could be applied to infants as well. Some children naturally internalized their emotional experience, exhibiting more autonomic reactivity while others manifested emotional

expressions and showed little change in autonomic arousal. The categories of externalizers and internalizers are not free from social evaluation. Field found that externalizers were viewed as more responsive and had "better" interactions with parents than inhibitors. Externalizers were also more popular in preschool.

Given the research on the inverse relationship between autonomic reactivity and expression and the individual difference dimension of externalizer-internalizer, it would seem reasonable to conclude that expression of emotion is healthy, lack of expression is unhealthy, and ambivalence over expression is an unnecessary construct. Although the inverse relationship between expression and autonomic activity is well-documented, this uncomplicated view has proven inadequate as our understanding of emotional expression and inhibition has grown. This inverse model ignores individual expressiveness goals. Such a model cannot encompass the complexity which is apparent in healthy adult emotion management. For instance, while there is evidence that facial display attenuates arousal (Buck, 1984) recall that evidence already reviewed (Lanzetta, Cartwright-Smith and Kleck, 1976) would suggest that it augments arousal. Also, previously discussed research suggests that inhibition can be a form of emotion management aimed at improved functioning and necessary for concentration and performance on various tasks. Research has demonstrated that autonomic reactivity may be related variously to nonexpression and expression as a function of situational factors, individual differences in characteristic styles of expression (Sackheim, 1983; Roth & Cohen, 1986) and the quality of the emotion itself (Tavris, 1984; Murray, 1985). For example, with regard to situational factors, Hokanson and Shetler (1962) did find that

subjects who aggressed against frustrators who were seen as possessing higher status than the subject, showed a trend toward elevated levels of arousal. Along similar lines, in her work on anger, Tavris (1984) has found that it is stressful for an individual who feels no desire to express emotion to be pressured into doing so. Lastly, researchers (e.g., Tavris, 1984; Murray, 1985) have pointed out that negative emotions such as aggression, anger, and hostility present special problems for individuals because the expression of these emotions may hold important ramifications for the social group. Furthermore, Bell and Byrne (1978) present evidence that repressors (i.e., internalizers) actually report fewer health problems than sensitizers (i.e., externalizers).

Perhaps the key flaw in the inverse conceptualization of the relationship between expression and arousal is that it fails to distinguish between comfortable inexpressiveness and inhibition. The assumption that emotion must or should be expressed carries with it the corollary that those who do not express emotion are inhibiting expression. Clearly, such an assumption may be erroneous. Sometimes a blank face or a seemingly inappropriate smile is a genuine indication of an individual's emotional state. As we shall see this problem has been encountered and acknowledged by researchers in the field of health psychology and it is a problem for which the Ambivalence over Expression Questionnaire is suggested as a solution.

An appropriate point of transition from the simplistic inverse relationship between expression and well-being to a more sophisticated, goal based model of this relationship is provided by Pennebaker (1985) in his suggestion that lack of expression per se may not be

pathogenic. Rather, according to Pennebaker, lack of emotional expression coupled with the desire to express emotion is the (literally) fatal combination. Pennebaker has found that individuals who inhibit their desire to confide in others about emotional life events are at an increased risk for the development of later health problems. Pennebaker has coined the phrase "active inhibition" to refer to the process of willfully preventing oneself from a desired action. Active inhibition is thought to be related to obsessive thoughts about the inhibited action and chronic autonomic arousal which leads eventually to physical breakdown.

Pennebaker's model of the relationship between emotional expressiveness and physiological stress accounts for the variety of individual styles of regulating emotion which exist in the healthy human experience. It is possible, within this model, for an individual who feels no strong desire to express an emotion to be inexpressive without any adverse consequences. If, however, one wishes to express an emotion but lacks the appropriate means of expression or believes that expression will be censured, then one is likely to actively inhibit expression. In this latter case, the individual is more likely to experience physical symptoms indicative of a long term increase in autonomic activity as well as lowered life satisfaction (Pennebaker, 1985). Through Pennebaker's conceptualization, nonexpression is clearly distinguished from inhibition. While nonexpression may refer to either a natural tendency not to be very expressive or to adaptive emotion management tactics, inhibition is an active process of denying oneself what one truly wishes to do for reasons which may involve guilt, shame, or uncertainty.

Individuals have different styles of dealing with emotion, styles which are to some extent learned (Jones, 1935) and to some extent present at birth (Field, 1982). When these styles come into conflict with social demands ambivalence may develop. As Buck states, "The social support and personal consistency of a coping style determines its protective effect (p. 251)." With this in mind, it seems most important that we look at individual styles of expression and individual expression repertoires.

Pennebaker's focus on the intent or desire to express emotion indicates that it is appropriate to look at individual's goals with regard to emotional expressiveness as important factors in determining the potentially pathogenic quality of certain characteristic styles of emotion regulation. Based on the research of Pennebaker, Tavis, Emmons (1986), and Emmons and King (1988), we may conclude that when these goals are in conflict with social norms or with other goals, an individual may experience the detrimental effects of psychosomatic reaction, whether they are expressive or inexpressive

The scope of the influence of conflict over expression is not limited to the psychological. Emotional expression has been linked to physical health as well as psychological well-being. Because the goal-based model of the relationship between ambivalence over expression and psychological well-being should also generalize to physical realm, literature will now be reviewed which will culminate in the inclusion of the concept of ambivalence over expression in the relationship between expressiveness and physical health. A careful examination of the applicable health psychology research will show that often although it appears on the surface that expression is an

insulation against physical illnesses, in fact the relationship between expression and illness is far more complex.

### Expressiveness Styles and Health

Given the relationship between emotional expression and autonomic arousal, it is not surprising that expressiveness styles have been associated with a variety of illnesses. Inhibition of expression and restrictive emotion management styles have been associated with a number of illnesses. As we broaden our knowledge of the relationship between emotion and illness, Fridlund, Newman and Gibson (1984) suggest that the term "psychosomatic" may become redundant since the role of emotional co-mediators will be implicit in every disease state. Emotion management issues have been brought up in relation to cancer (e. g., Pelletier, 1985; Cox & McCay, 1982), coronary heart disease (CHD) (Friedman, Hall, and Harris, 1984), arthritis (Udelman & Udelman, 1981), and chronic pain and depression (Beutler et al, 1986).

Pelletier (1985) included among the personality characteristics of cancer victims the tendency to "bottle up" and the inability to express negative emotions. The "cancer-prone" personality has been characterized by a nonexpression of negative mood, suppression of negative traits and coping by perseverance (Fridlund, Newman, & Gibson, 1984). These generalizations are based on numerous studies which have found that expressiveness styles can be used to predict diagnosis of malignancy as well as prognoses.

In their 1982 review, Cox and McCay trace the long history of the search for a connection between expressiveness and cancer. Galen (cited in Cox and McCay) observed that melancholic women were more likely to develop breast cancer than sanguine women. In the eighteenth



century, Guy (in Cox & McCay) maintained that hysteric complaints were linked to cancer, and in the nineteenth century, Snow (1883) declared that intense emotion drained the body's vitality, lessening resistance to cancer. More recently, in the 50's and 60's, researchers sought to connect particular psychological conflicts with cancers in particular body sites, along similar symbolic lines as those described in Freud's conversion disorder sufferers (e.g., Tarlau & Smalheiser, 1951). More recently, studies have begun to pinpoint conflict over emotional expression as a culprit in the etiology of cancer. Bacon et al. found that breast cancer patients possessed an inability to deal with anger, aggression and hostility (cited in Cox and McKay). "Limited" prospective studies (i.e., using women who have "suspicious" lumps that have not yet been diagnosed as malignant) have found that the characteristic that distinguishes between women with benign lumps and those with malignancies is low neuroticism scores and restricted outlets for the expression of negative emotion (Cox & McCay, 1982). Greer & Morris (1975) found that women with breast cancer were likely to possess abnormal patterns of emotional behavior, particularly extreme suppression of anger. Although few "true" prospective studies have been done, those that exist support the premise that the inability to express negative emotion is associated with breast cancer (Cox & McCay, 1982). While feelings of hopelessness have also been associated with cancer, Cox and McCay conclude that the strongest predictor of cancer is an anti-emotional attitude, particularly an inability to express negative emotion.

Derogatis, Abeloff, and Melisaratos (1979) evaluated long- and short-term survivors of breast cancer. They found that those women who

were evaluated by observers as showing high adjustment to their illness and as having more positive attitudes toward their physicians died more quickly than less well-adjusted patients. On self-report measures, long-term survivors scored significantly higher than short-term survivors in hostility, anxiety, psychoticism, depression, guilt, and negative affect. Long-term survivors also reported themselves as feeling more vigor than short-term survivors. Importantly, the two groups did not differ in physical characteristics. Derogatis, et al. concluded that long-term survivors were better able to externalize their negative moods. Morris, Greer, Pettingale & Watson (1981) found that cancer patients tended to score significantly lower in anger expression than women who had lumps which were benign. Cancer patients tended to score high on "lie" or "social desirability" scales. These differences were especially pronounced among younger subjects. The portrait of the cancer personality that emerges out of these studies is that of a well-adjusted, content, uncomplaining individual—in short, just exactly the opposite of our expectations for one diagnosed with a potentially terminal illness.

In an intriguing analysis, Beutler, Engle, Oro-Beutler, Daldrop and Meredith (1986) conclude that the most consistent psychological link between depression and chronic pain is the "inability to modulate or express intense unacceptable feelings (p. 752)." Beutler et al. maintain that "those who possess this inability may be at increased risk for both chronic pain and depression (p. 752)." Beutler et al. identify the most observed correlates of chronic pain and coexisting depression are somatoform anxiety and conflict over expression of anger. They propose that prolonged blocking of intense anger may be

related to increased disease susceptibility and suggest that therapeutic intervention be aimed at providing outlets for unexpressed anger. They state, "the nature of emotion, its target of expression, and the environment in which it is expressed are important determinants of its helpful or deleterious effect on pain (p. 757)." To this list, we might add more specifically, the importance of the congruence between environmental display demands and expectations and individual styles of expression.

Udelman and Udelman (1981) emphasize the importance of emotional expression in the improvement of arthritis. They identify the problem of "contained hostility" as typical of arthritis sufferers. Udelman and Udelman emphasize the importance of case-by-case decisions for therapeutic uses of emotion and expression. They stress that knowledge of and respect for individual styles of expression may be key to therapeutic success.

Emotion management has also been associated with coronary heart disease (CHD). Friedman et al. state that the Type A Behavior Pattern (TABP) is "intimately related to...coping with and expression of emotions (p. 151)." In this area, evidence has been equivocal as to the beneficial effects of expressiveness (Friedman, Hall, & Harris, 1984). The criteria for the identification of TABP include nonverbal expressions of anger. Unlike cancer-prone individuals, Type A personalities tend to be overtly expressive of hostility. The relationship between expression of hostility and TABP is not so clear-cut, however. Studies have supported the idea that repressed hostility was associated with CHD (Gildea, 1949; Cady, et al., 1961, cited in Friedman, et al.). At the same time, Friedman, et al.

acknowledge that there are individuals who are overtly expressive of their emotions (including anger) who are not Type A but are naturally charismatic. "True" Type A's tend to have a negative, hostile, competitive style. Thus, individuals who express hostility as well as those who "bottle it up" may be at risk for CHD.

The case of CHD demonstrates the importance of individual styles of emotion management in the development of pathology because expression and inhibition can both be related to CHD. Obviously a construct like ambivalence over expression is vital to the study of the connection between physical well-being and emotional expression. Expression itself will not predict which individuals develop health problems. However, the relationships between emotional experience and expression as well as between situational demands and individual styles of emotion management may do just that.

One of the most important tasks for a questionnaire measure of emotion management is to discriminate between those whose styles are protective and those whose styles are not. A measure of expressiveness cannot perform this critical task because it taps only whether or not a person characteristically expresses emotions, not how comfortable or confident he or she feels with this characteristic style or whether nonexpression is actually a product of inhibition. A comparison of a measure of expressiveness, the Affect Communication Test (ACT; Friedman, Prince, Riggio, and DeMattea, 1980) and the proposed AEQ will clarify the differences between the ultimate goals of the two scales.

As previously stated, one of the difficulties in identifying Type A's is that they may be either expressive or inhibitive of negative emotion. Figures 1 and 2 are the Friedman et al. conceptualization of

this situation. Note that the groups who are high in coronary proneness cannot be distinguished by their scores on the ACT. In Figure 1, individuals who are expressive of their hostility and competitiveness and those who tend to overcontrol their negative emotions are at risk for CHD. These groups may be confused by the ACT because they both feel intense emotion. In Figure 2, individuals who are quiet and relaxed are confused with people who are repressed and over-controlled because of their similar emotion-management styles. These individuals may differ in their perceptions of their styles as well as in their attitudes toward emotion. One purpose of the AEQ is to distinguish between relaxed quiet people (i.e., healthy inexpressive individuals) and repressed, tense people (unhealthy inhibitors).

Figure 1. CHD risk and expressiveness (From Freidman, Hall, and Harris, 1984).

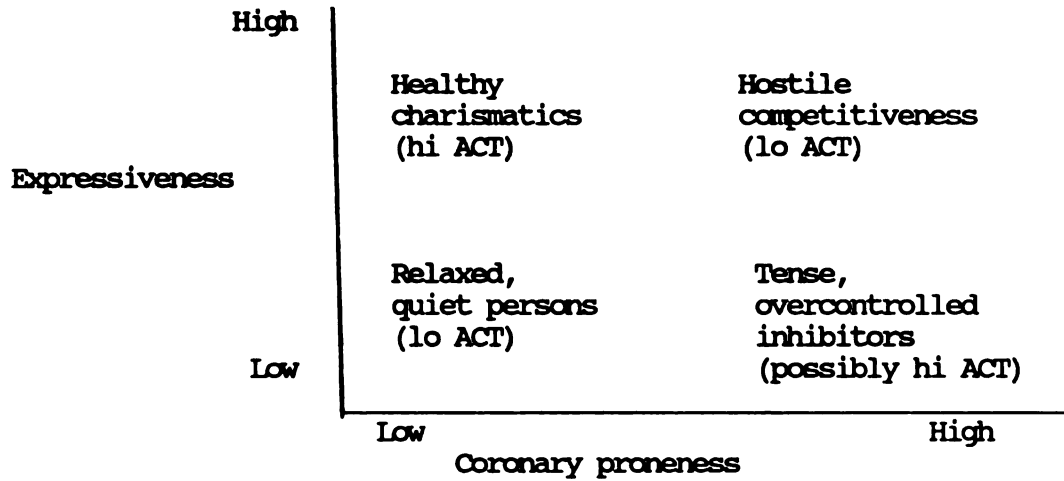


Figure 2. Diagnosis of Type A based on expressiveness.

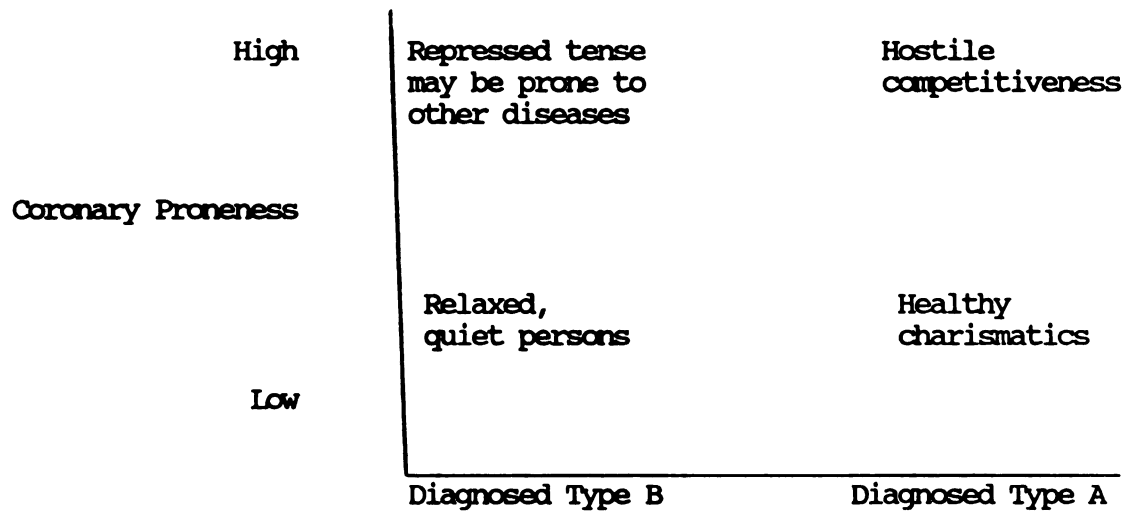


Figure 3 presents an illustration of the rationale behind the Ambivalence Over Expression Questionnaire. Individuals who fall in either cell I or cell III would be at risk for physical disorder because, regardless of whether or not they characteristically express emotion, they feel highly ambivalent about it. This conceptualization of expression and ambivalence about expression makes no a priori assumption about the healthfulness of emotional expression in and of itself. Rather emphasis, is placed on individual satisfaction within either characteristic emotion management strategy.

Figure 3. Cells II and IV are at risk for illness.

Expressiveness	High	I	II
	Low	III	IV
		Low	High
		Ambivalence	

### Gender Differences

A fascinating subarea within the area of emotion research is that of sex differences. In turn, emotional expression and emotion management are among the most central issues in the study of gender differences. To some extent, proposed gender differences in emotion and emotional expression are prototypical of all gender differences. Cultural stereotypes dictate that women are often perceived as more "at home" with emotion than men. This perception seems justified by Shields' findings (1987) that among her subjects, women were more likely to value emotional expressiveness, more readily reported themselves as emotional, and reported experiencing a wider variety of emotions compared to men. In addition, women viewed male and female expression as healthy while men viewed male expression negatively and female expression positively. The prediction that women will be more ambivalent over emotional expression than men is based on three important aspects of the relationship between sex, gender and emotional expressiveness: 1) cultural deference to emotion management over emotion expression; 2) sex differences in emotionality, the socialization of emotion display rules and the institutionalization of these rules; and, finally 3) the special case of women and anger.

The first of these aspects is the most obvious. In any society, emotion must be managed (Allport, 1924). Shields (1987) suggests that in our society the value which is placed on knowing one's feelings is not so much an encouragement of expression as a means to ensure proper management and regularization of emotion. Clearly, ambivalence is not so much an issue of expression as it is of management. Thus, the common assumption that women are more "in touch" with their emotions



and are better at conveying these emotions than men is not necessarily pertinent to the issue of ambivalence in women. Sex and gender differences in expressiveness are not as relevant here as sex and gender differences in management. Do these differences exist and if so how do they pertain to the question of ambivalence over emotional expression?

Developmental psychology has produced provocative research which speaks to this question of gender differences in emotion management skills. Various researchers have videotaped and analyzed infant expressive behaviors and emotional interactions between infants and mothers. This research has shown that there are differences in emotionality between boys and girls and, more importantly, that boys and girls are given different forms of training in display rules. Malatesta (1985) has found that in the opening weeks of life, male infants demonstrated more labile affect than female infants. Boys showed more grimacing, more changes in expression, and were more easily startled than girls. Female infants tended to be more attentive to social stimuli (e. g., faces and faces accompanied by voices) than male infants. Female infants spent more time making and sustaining eye contact than male infants. In sum, male babies were more emotional and female babies more sensitive to social cues. An interesting side note to these results indicates that the latter point must be taken with a grain of salt. Malatesta and Haviland (1982) point out that physical differences in the facial structure may lead adults to conclude that female infants are more attentive than male infants. Females' eyebrows are set higher on the forehead than males', giving females a more "interested" look than males. The implications of this simple physical

difference could be profound. Female infants may be perceived as more "sociable" and may be treated differently from male infants as a result. Perhaps a stronger emphasis on the social aspects of experience as children could lead adult women to feel more ambivalent about emotional expression than men. Women may be trained to be more aware of the social consequences of the expression of emotions, particularly negative emotions.

In addition to differences in the earliest part of infancy, differences have been observed in the socialization of expression rules for boys and girls. With regard to early socialization, Malatesta and Haviland (1982) found that for both sexes, mothers tend to respond in a fashion that is contingent with their baby's expressions. However, mothers typically respond differently to male and female infants. The mothers studied by Malatesta and Haviland tended to engage in more expression matching behaviors in dealing with sons than in dealing with daughters. Mothers more often matched their sons expressions and followed their daughters' expressions with dissimilar responses. Mothers also inhibited nonmatching responses with boys but not with girls. Generally, mothers were more variable with daughters than with sons. It would seem then, that daughters are exposed to a wider range of expressions (which may be connected to the broader range of emotions that women report experiencing) while sons are exposed to reinforcement of a limited set of expressions. Contingent responding increased with age for boys but decreased with age for girls. One might surmise that girls are given more emotional independence than boys.

Lewis and Michalson (1985) found that mothers increased responsiveness to displays of positive emotion and decreased

responsiveness to displays of negative emotion for both boys and girls. But, importantly, mothers became less responsive to the crying of male babies relative to female babies. Thus, male babies are given differential treatment with regard to negative emotion. Perhaps, male infants learn that their displays of negative emotion must be managed. This would indicate that, for better or worse, boys are given explicit emotion management training particularly for negative emotions while girls are not.

Shennum and Bugental (1982) report that among grade schoolers sampled, girls were more adept than boys at masking their emotions (i.e., displaying the emotion opposite the one they felt) while boys were superior at inhibiting emotional expression. In a study of fifth graders, Cole (1985) found that boys were better at deception than girls. Boys were particularly better able to neutralize their negative emotions (Cole, 1985). In the same sample, Cole found that the oldest girls were best at appearing pleased with a reward when they were actually disappointed. Thus, from infancy to grade school girls are more adept at manipulating emotional expression while boys are better able to simply inhibit their expressions, especially for negative feelings.

Differences in socialization may not immediately appear significant to adult lives. However, if we consider that males and females can experience different socialization processes for display rules, then we have only to recall that in our society, typically, what is male is often held up as the standard (see Chodorow, 1978), we will have set the stage for a great deal of female ambivalence over emotional expression. If we conclude for the sake of argument that the

results of research on socialization differences are a reflection of a real difference, we can assume that men and women are not taught the same emotion management skills as children. Men are given more explicit rules while women are given more expressive freedom. This feminine freedom would seem an advantage except that a "freeness" with emotion is not valued by society—emotional control is. Rules that as infants may be considered to be "male" rules become "the" rules in adulthood. To make matters worse, these adult (formerly "male") display rules are implicit in adult culture and are only made explicit once they are broken. The end result is that women are not trained in the display rules of the culture which they will later infiltrate as students, adults, mothers, and workers. Particularly, the research here demonstrates that men are given specific training as to the appropriate manner in which to deal with negative emotions. The emotion of anger has been described by many as a potential problem for women. Anger may be viewed as one of the most ambiguous emotions for women, in that women are not specifically trained for dealing with it and it is portrayed socially as an "un-feminine" emotion.

Although emotions in general have been identified almost entirely as a feminine domain (Shields, 1987; Keller, 1985; Hochschild, 1975), the emotion of anger, which Shields regards as "an emotion of entitlement," is not traditionally associated with women or "feminine" roles and as such presents a special problem for women as individuals. On an abstract level, women have been viewed as the communal, connective force in a culture (Keller, 1985), while anger can be viewed as the emotion of disconnection. Looking at the expression of anger as an emotion management issue, we can see that the role of nurturer

allotted to women is a specifically emotional role which carries with it particular feeling and display rules. Furthermore, because the female/feminine role is an explicitly emotional role, women are routinely placed in situations in which display rules which govern expressions conflict.

Hochschild (1975) states that, for women, feeling rules conflict within and across contexts--women are, in general, expected to be caring and nurturant while specific contexts (e. g., in the workplace) demand "affective neutrality" or even outright hostility.

Bernardez-Bonesatti (1978) has suggested that the problem of anger could lead to further problems for women in terms of achievement and power motivation. She links the inability to express anger to pathological submissiveness, self-defeating behavior, self deprecation, and depression. "The capacity to express anger is crucial to the development of goal-directed behavior" (1978, p. 217).

Bernardez-Bonesatti sees women as tending to "water down" their anger in order to preserve interpersonal bonds. The balance which must be maintained (if it can ever be achieved) between general, pervasive, cultural expression expectations and the feeling requirements of daily life is a delicate one. It is not difficult to imagine how negotiating this balance and the conflicts it implies could ultimately breed ambivalence about emotional expression. This ambivalence is predicted to impinge on females' health and psychological well-being in the ways which would be expected, given the previous discussion.

This discussion of sex differences in emotional expressiveness and ambivalence over expression demonstrates the different predictions that arise from the goal-based model of expression as compared to the more

traditional view of emotion. While the older view of emotion would predict that those who are more expressive will be more healthy, in this discussion of sex differences, the conclusion is reached that while women are typically more expressive than men they will also be more ambivalent over expression. Further, because they are more ambivalent over expression women are predicted to suffer the negative health consequences which have been associated with ill-being and which are here attributed to underlying ambivalence. Thus, it is precisely those who are most expressive who are predicted to suffer greater distress. Men, who are inexpressive (but not necessarily inhibited), are predicted, because of the social approval of their style as well as the training received in that inexpressive style, are predicted to be better off physically and psychologically.

### Summary

Individually and culturally, emotional expression presents a dilemma. Expression is viewed as necessary and healthy and at the same time as self-indulgent and uncivilized. Ambivalence over emotional expression is suggested here as an important factor in the relationships between emotional expression and psychological and physical well-being. While traditionally expression has been treated as the healthy and natural end to emotion and lack of expression has been concluded to be unhealthy, the present perspective maintains that neither expressiveness nor inexpressiveness is, in and of itself, healthy or pathogenic. Rather, ambivalence over one's style of emotional expression is presented as the underlying factor that is associated with pathological outcomes. In order to examine the importance of ambivalence over expression and expressiveness to

well-being two questionnaire measures were constructed—one to measure each of these constructs. The development and application of these questionnaires will be described in the two studies reported here.

In the first study the scales were created to measure ambivalence over emotional expression and emotional expressiveness. These scales were administered to a large group of students at Michigan State University. This data will be used in a factor analysis of the scale and a comparison of sex differences in actual expressiveness and ambivalence over expression.

## Study 1: Factor Analysis

### Development of the Questionnaire

A list of 600 personal strivings that had been collected from subjects in an earlier study (Emmons, 1986), were examined and those strivings that dealt with emotion were compiled into a list. This list was used as a basis for the generation of 109 items about emotional behavior. Items in this large list were divided into three categories according to their major focus: strivings, behaviors, and attitudes. The behavior items were placed in a separate questionnaire, the Emotional Expressiveness Questionnaire (EEQ), which featured a rating scale from 1 to 7 with 1 indicating the subject did not agree with the item at all and a 7 indicating that the subject strongly agreed with the item. An example of an item from the EEQ is "People can tell from my facial expressions how I am feeling." High scores on the EEQ indicate a tendency to express emotion (See Appendix A).

The remaining striving items were reworded in order to address their potentially ambivalent character. This rewording was performed with an effort to preserve the original wording and intent. For instance, the striving, "I typically strive to express my emotions honestly" became "I want to express my emotions honestly but I am afraid that it may cause me embarrassment or hurt." Instructions for the AEQ emphasized that the subject answer each item with a view to its overall meaning. Thus, if a statement consisted of two thoughts, subjects were encouraged to give the item a high rating only if both thoughts applied to them. The rating scale for the questionnaire was a scale from 1 to 5, with 1 indicating that the respondent never feels like the statement suggests and a 5 indicating that the respondent



frequently feels that way (See Appendix B).

It may be noted that no items on the AEQ are negatively worded. Response bias has been an enduring concern in psychological research. However, because of the complex nature of the items reverse wording was deemed infeasible. The potential contamination of scores by acquiescence is not likely to be great however as such bias is most likely to influence dichotomous judgments not rating scales (Schriesheim & Hill, 1981). In addition, Schriesheim and Hill (1981) have reported that negative items may impair response accuracy. They found that negatively worded items actually impaired reliability. In the case of a questionnaire with items that are already compound in nature, the disadvantages of negatively worded items were believed to outweigh the advantages.

#### Predictions

1. Social desirability and convergent validity. It is predicted that neither the AEQ nor the EEQ will be positively correlated with the Marlow-Crowne Social Desirability Scale. It is further predicted that the AEQ will be significantly positively correlated with the Raulin Intense Ambivalence Scale (Raulin, 1984). Such a correlation can be taken as evidence of the validity of the AEQ.
2. Sex differences. For reasons specified previously, it is predicted that overall, women will be significantly more expressive and more ambivalent over expression than men. More specific predictions can be made with regard to the origin of this overall difference. With regard to expression, Hochschild, Shields, and Bernardez-Bonesatti suggest that female predominance in the emotional realm does not generalize to negative emotions. Thus the overall

difference in expressiveness should be due to differences on positive and intimacy emotions rather than negative emotions.

With regard to ambivalence over expression, women should be more ambivalent over expression of negative emotion, since developmental literature cited previously would suggest that men are taught explicit rules for dealing with negative emotion while women are not. Thus, the overall difference between men and women should be accounted for by differences in the ambivalence over the expression of negative emotion and not in reference to positive emotions.

3. The relationship between the AEO and EEO. Because Emmons and King (1988) have found that individuals tend not to act on the goals about which they feel ambivalent, it is predicted that scores on the ambivalence scale will be negatively correlated with scores on the expressiveness scale.

#### Method

Subjects. Two hundred and ninety-nine Michigan State University students (117 males and 182 females) completed a packet of questionnaires for extra credit in various undergraduate psychology courses. Male subjects ranged in age from 18 to 26 with a mean age of 19.8 years. Female subjects ranged in age from 18 to 32 with a mean age of 19.1. All but two of the female respondents were under the age of 26.

Subjects were informed in class that their packets would be checked for completeness and carefulness (in order to determine the amount of credit received) after which their names would be removed from the packet, ensuring anonymity. Completion of the packet was completely voluntary.

## Materials

The surveys which were completed by this sample of subjects included the newly designed AEQ and EEQ. The Raulin Intense Ambivalence scale (Raulin, 1984) and the Marlow-Crowne Social Desirability Questionnaire (Marlow-Crowne & , 1964) were included for construct validity purposes.

## Results and Discussion

Data analyses for Study 1 involved 4 steps: 1) the item and factor analysis and validation of the AEQ and EEQ; 2) a comparison of AEQ and EEQ scores for male and female subjects; 3) the computation of Pearson correlation coefficients for the AEQ, the EEQ, their subscales, the Marlow-Crowne, and the Raulin I-A scale; and 4) the computation of the Pearson correlation coefficients for the revised AEQ and revised EEQ.

## Reliability and Factor Analysis of The AEQ

Items on the AEQ were deleted for conceptual reasons, because they seemed to pertain to inhibition of emotional expression or masking of expression without mention of a conflicting desire to express or because they referred to the quality of emotional experience itself. Several items were deleted because they seemed to pertain more to self-assertion than emotional expression. One item was deleted because it referred to thinking about life events rather than expressing emotion. Additional items were deleted on the basis of low item-total correlations. The deletion of items left a total of 28 items in the revised AEQ with a mean inter-item correlation of .23, a minimum inter-item correlation of .02 and a maximum inter-item correlation of .64. Item-total correlations for the AEQ are shown in

Table 1. The alpha reliability coefficient of the AEQ was .89. The mean for scores on the scale was 2.9 (on a 5-point scale) and the scale standard deviation was .58.

Table 1

## Item-total Correlations for Revised AEQ

<u>Item</u>	<u>Item-total correlation</u>
1. It is hard to find that right words to indicate to others what I am really feeling.	.58
2. I worry that if I express negative emotions such as fear and anger, other people will not approve of me.	.56
3. I want to express my emotions honestly but I am afraid that it may cause me embarrassment or hurt.	.56
4. I often cannot bring myself to express what I am really feeling.	.56
5. I'd like to talk about my problems with others, but at times I just can't.	.55
6. I want to tell someone when I love them, but it is difficult to find the right words.	.55
7. I would like to express my disappointment when things don't go as well as planned, but I don't want to appear vulnerable.	.55
8. Often I'd like to show others how I feel, but something seems to be holding me back.	.52
9. I try to hide my negative feelings around others, even though I am not being fair to those close to me.	.52
10. Often I find that I am not able to tell others how much they really mean to me.	.51
11. I try to keep my deepest fears and feelings hidden, but at times I'd like to open up to others.	.48
12. I would like to be more spontaneous in my emotional reactions but I just can't seem to do it.	.46
13. I can recall a time when I wish that I had told someone how much I really cared about them.	.45
14. I feel guilty after I have expressed anger to someone.	.44
15. I would like to express my affection more physically but I am afraid others will get the wrong impression.	.42
16. I try to suppress my anger, but I would like other people to know how I feel.	.42

Table 1, continued

<u>Item</u>	<u>Item-total correlation</u>
17. I try to apologize then I have done something wrong but I worry that I will be perceived as incompetent.	.41
18. After I express anger at someone, it bothers me for a long time.	.41
19. I try to show people I love them, although at times I am afraid that it may make me appear weak or too sensitive.	.40
20. I strive to keep a smile on my face in order to convince others I am happier than I really am.	.40
21. When someone bothers me, I try to appear indifferent even though I'd like to tell them how I feel.	.38
22. I try to avoid sulking even when I feel like it.	.36
23. When I am really proud of something I accomplish I want to tell someone, but I fear I will be thought of as conceited.	.36
24. I try to refrain from getting angry at my parents even though I want to at times.	.36
25. I try not to worry others even though sometimes they should know the truth.	.36
26. I try to control my jealousy concerning my boyfriend girlfriend even though I want to let them know I'm hurting.	.34
27. I think about acting when I am angry but I try not to.	.33
28. I make an effort to control my temper at all times even though I'd like to act on these feelings at times.	.25

An exploratory factor analysis was conducted on the inter-item correlation matrix for the AEQ for men and women separately to see if there were important differences between the sexes in the factor structure of the scale. For both male and female subjects, 2 large factors emerged—one for positive emotion and 1 for negative emotion. Since there were only slight differences in the factor solutions, data were combined across sexes in further analyses.

An exploratory factor analytic procedure was used to investigate the factor structure of the AEQ. Principle components extracted two factors with eigenvalues greater than one. A VARIMAX rotation was used because it was judged most likely to yield an interpretable solution (Hunter, 1985). Sixteen items loaded highest on the first factor (eigenvalue = 6.70) accounting for 17% of the variance. Items and loadings can be seen in Table 2. Items loading on this factor concerned love and affection as well as a fear of expression of emotions that might lead to vulnerability. Examples of the types of items that loaded on the first factor include, "Often I find that I am not able to tell others how much they really mean to me," "I try to show people I love them although at times I am afraid that it may make me appear weak," and "I want to tell someone when I love them, but it is difficult to find the right words." This factor can be termed ambivalence over the expression of positive emotion and self-disclosure.

Twelve items loaded on the second factor (eigenvalue= 1.35). This factor accounted for 12% of the variance. Items loading on on this factor also pertained to ambivalence over expressing primarily negative emotions (e. g., "After I express anger at someone it bothers

me for a long time.") However, one item dealing with pride also loaded on the second factor, " When I am really proud of something I accomplish I want to tell someone but I fear I will be thought of as conceited." Another example of an item from that cluster is item 4, "I try to control my jealousy concerning my boyfriend or girlfriend even though I want to let them know I'm hurting." These items and their loadings are shown in Table 2. Because items loading on the second factor pertained not only to anger but to feelings of pride and jealousy, the term of "entitlement" (as per Shields, 1987) was selected to encompass all of these. The second factor was concluded to tap ambivalence over expression of emotions of entitlement.



Table 2

## Loadings for Two Factor Solution for Revised AEQ

<u>Item</u>		
	Factor 1 <u>Positive/Self-Disclosure</u>	Factor 2 <u>Entitlement</u>
32. Often I find that I am not able to tell others how much they really mean to me.	.68	.04
33. I want to tell someone when love them, but it is difficult to find the right words.	.66	.12
16. Often I'd like to show others how I feel, but something seems to be holding me back.	.61	.13
25. I'd like to talk about my problems with others, but at times I just can't.	.59	.20
23. I try to keep my deepest fears and feelings hidden, but at times I'd like to open up to others.	.57	.12
2. I want to express my emotions honestly but I am afraid that it may cause me embarrassment or hurt.	.55	.27
36. I often cannot bring myself to express what I am really feeling.	.54	.30
42. It is hard to find that right words to indicate others what I am really feeling.	.54	.34
13. I would like to express my affection more physically but I am afraid others will get the wrong impression.	.51	.09
34. I would like to express my disappointment when things don't go as well as planned, but I don't want to appear vulnerable.	.46	.35
39. I try to hide my negative feelings around others, even though I am not being fair to those close to me.	.45	.33

Table 2, continued

<u>Item</u>	<u>Positive/Self-Disclosure</u>	Factor 1	Factor 2
<u>Entitlement</u>			
40. I would like to be more spontaneous in my emotional reactions but I just can't seem to do it.	.44	.24	
28. I try to show people I love them, although at times I am afraid that it may make me appear weak or too sensitive.	.41	.15	
22. I strive to keep a smile on my face in order to convince others I am happier than I really am.	.39	.21	
38. I can recall a time when I wish that I had told someone how much I really cared about them.	.38	.31	
14. I try not to worry others even though sometimes they should know the truth.	.38	.15	
48. After I express anger at someone, it bothers me for a long time.	.10	.63	
44. I feel guilty after I have expressed anger to someone.	.16	.59	
41. I try to suppress my anger, but I would like other people to know how I feel.	.15	.51	
43. I worry that if I express negative emotions such as fear and anger, other people will not approve of me.	.36	.49	
46. I think about acting when I am angry but I try not to.	.09	.49	
26. When someone bothers me, I try to appear indifferent even though I'd like to tell them how I feel.	.20	.42	
5. I make an effort to control my temper at all times even though I'd like to act on these feelings at times.	.03	.38	

Table 2, continued

	Factor 1	Factor 2
<u>Item</u>	<u>Positive/Self-Disclosure</u>	<u>Entitlement</u>
8. I try to avoid sulking even when I feel like it.	.17	.38
27. I try to refrain from getting angry at my parents even though I want to at times.	.19	.37
30. I try to apologize then I have done something wrong but I worry that I will be perceived as incompetent.	.29	.35
4. I try to control my jealousy concerning my boyfriend or girlfriend even though I want to let them know I'm hurting.	.18	.34
9. When I am really proud of something I accomplish I want to tell someone, but I fear I will be thought of as conceited.	.24	.32

A subsequent confirmatory factor analysis was performed on for the results of the exploratory factor analysis. A confirmatory factor analysis was undertaken as a follow-up to the exploratory analysis for several reasons. First, the confirmatory factor analysis allows for a check of the internal consistency of the clusters. If the analysis employs communalities in the diagonal, the items' loadings on the clusters represent an estimate of their correlation with the true score for the trait underlying the cluster. If the items all load highest on the cluster in which they have been placed by the exploratory analysis, the clusters can be concluded to be internally consistent (Hunter, 1985). Most importantly, a confirmatory factor analysis allows for the testing of a measurement model based on classic reliability theory (Hunter).

Items loading on each factor were entered into a cluster analysis using PACKAGE (Hunter, 1988). Both clusters had high reliabilities ( $\alpha = .87$  for the ambivalence over positive emotion cluster and  $\alpha = .77$  for the ambivalence over expressions of entitlement cluster). All of the items did load highest on the cluster into which the exploratory analysis placed them. Generally, however, items were highly correlated with both of the clusters. In addition, the two clusters were themselves highly correlated ( $r = .71$ ). This high correlation as well as the high correlations of items with both clusters suggested that the AEQ might be best characterized as tapping a single general construct, ambivalence over emotional expression.

A second order confirmatory factor analysis was performed on the two clusters yielding the matrix shown in Table 3. A single general factor emerged with an eigenvalue of 1.39 on which both clusters

loaded highly.

Table 3

AEQ Cluster Correlation Matrix with the General Factor

	Factor 1	Factor 2	Factor 3
Positive	.71	.70	.84
Negative		.71	.84
General			1.00

A path analysis was used to test the measurement model that is shown in Figure 4. The purpose of this test was to demonstrate that the correlations between the clusters could be seen as spurious—a product of the general factor underlying them both. The sum of the squared deviations of the predicted correlations from the observed correlations (a measure of overall fit) was less than .02. A chi-square test of the residuals was not necessary to demonstrate these deviations to be insignificant.

Although these results support the contention that the AEQ is unidimensional, we will retain the subclusters which emerged in these analyses in order to investigate the proposed sex differences for the different specific types of emotions, after which the subscales will be disregarded.

Figure 4. Measurement model with path coefficients.



Reliability and Factor Analysis of the EEQ

Initially, items on the Emotional Expressiveness Questionnaire (EEQ) were deleted for conceptual reasons. Upon close examination it became clear that several of the items tapped positive self-assertiveness rather than emotional expressiveness per se, and these items were deleted. Other items were deleted because they referred to emotional experience itself rather than to emotional expression. Additional items were deleted on the basis of low item-total correlations and inconsistent inter-item correlations. The deletion of items left a total of 16 items in the EEQ with a mean inter-item correlation of .18, a minimum inter-item correlation of .06 and a maximum inter-item correlation of .59. Item-total correlations for the EEQ are shown in Table 4. The mean for scores on the scale was 4.6 (on a 7-point scale) and the scale standard deviation was .76. The alpha reliability coefficient of the EEQ was .78.

Table 4  
Item-total Correlations for Revised EEQ

<u>Item</u>	<u>Item-total Correlation</u>
8. I often tell people that I love them.	.54
45. I show that I like someone by hugging or touching that person.	.49
36. I often touch friends during conversations.	.49
23. Watching television or reading a book can make me laugh out loud.	.49
10. I laugh a lot.	.42
1. When I am angry people around me usually know.	.40
12. People can tell from my facial expressions how I am feeling.	.37
30. Whenever people do nice things for me, I feel "put on the spot" and have trouble expressing my gratitude. (-)	.37
18. When I really like someone they know it.	.37
25. I often laugh so hard that my eyes water or my sides ache.	.34
22. When I am alone, I can make myself laugh by remembering something from the past.	.31
34. My laugh is soft and subdued. (-)	.30
29. If a friend surprised me with a gift, I wouldn't know how to react.	.29
14. I apologize when I have done something wrong.	.24
26. If someone makes me angry in a public place, I will "cause a scene."	.19
7. I always express disappointment when things don't go as I'd like them to.	.18



Initially, factor analyses for the EEQ were conducted for males and females separately, however because the solutions were virtually identical the group was used as a whole in all further analyses. Because no a priori clusters were hypothesized for the EEQ, the inter-item correlations were entered into an exploratory factor analysis, using communalities to correct for attenuation due to error of measurement. Principle components extracted 3 factors with eigenvalues greater than 1 which were rotated orthogonally via VARIMAX rotation. The eigenvalue for the first factor was 3.41, for the second factor it was 1.10 and for the third factor it was 1.30. Seven items (23, 22, 15, 10, 45, 36, and 34) loaded on the first factor. All of these items refer to the expression of positive emotions such as laughter, liking, and affection. Thus, this factor was labeled "Expression of Positive Emotion". It accounted for 14% of the variance. Items and their loadings appear in Table 5.

As can be seen in Table 5, four items (1, 12, 7, 26) loaded highest on the second factor. All but one of these items (i. e., #12) concern the expression of negative emotions (e. g., anger, disappointment). Thus, this factor was termed the "Expression of Negative Emotion". It accounted for 10% of the variance.

Five items loaded highest on the third factor. All of these items (30, 29, 8, 18, 14) pertain to liking (18), love (8), gratitude (29, 30) and apologizing (14). Because these emotions center around relational concerns this factor was retained as different from the first factor and it was termed "Expressions of Intimacy". This third factor accounted for 12% of the variance.

Table 5

## Three Factor Solution for Revised EEQ

<u>Item</u>	<u>Loading</u>		
	Factor 1 <u>Positive</u>	Factor 2 <u>Negative</u>	Factor 3 <u>Intimacy</u>
23. Watching television or reading a book can make me laugh out loud.	.72	.07	.10
22. When I am alone, I can make myself laugh by remembering something from the past.	.67	-.05	-.01
25. I often laugh so hard that my eyes water or my sides ache.	.58	-.02	.06
10. I laugh a lot.	.50	.02	.24
45. I show that I like someone by hugging or touching that person.	.49	.29	.35
36. I often touch friends during conversations.	.42	.19	.39
34. My laugh is soft and subdued. (-)	.30	.20	.05
1. When I am angry people around me usually know.	.07	.67	.12
12. People can tell from my facial expressions how I am feeling.	.12	.51	.15
7. I always express disappointment when things don't go as I'd like them to.	.00	.50	-.06
26. If someone makes me angry in a public place, I will "cause a scene."	-.03	.50	.01
30. Whenever people do nice things for me, I feel "put on the spot" and have trouble expressing my gratitude.(-)	.07	-.05	.74
29. If a friend surprised me with a gift, I wouldn't know how to react.	.02	-.08	.67

Table 5, continued

<u>Item</u>	<u>Loading</u>		
	Factor 1	Factor 2	Factor 3
	<u>Positive</u>	<u>Negative</u>	<u>Intimacy</u>
8. I often tell people that I love them.	.20	.41	.49
18. When I really like someone they know it.	.24	.33	.47
14. I apologize when I have done something wrong.	.19	.13	.24

A subsequent confirmatory factor analysis (using PACKAGE, Hunter, 1988) was conducted using the clusters which emerged in the exploratory analysis. Each cluster had a substantial reliability coefficient considering the small number of items in each; for the expression of positive emotion cluster,  $\alpha = .74$ ; for the expression of negative emotion cluster,  $\alpha = .63$ ; and for the expression of intimacy cluster,  $\alpha = .67$ . The cluster correlation matrix is shown in Table 6. All of the clusters were positively correlated although the expression of negative emotion cluster was not correlated as strongly with either the expression of positive emotion cluster or the expression of intimacy cluster as those two clusters were correlated with each other.

Table 6

Cluster Intercorrelation Matrix for Three Factor Solution  
For the Revised EEQ Scale

	EEP	EEN	INT
EEP	1.00	.29	.58
EEN		1.00	.37
INT			1.00

Note. EEP = Expression of Positive Emotions; EEN = Expression of Negative Emotions; INT = Expressions of emotions of Intimacy/Relationship.

#### Social Desirability and Ambivalence

Correlations were computed between scores on the AEQ, the EEQ, their subscales, and the Marlow-Crowne Social Desirability scale to ensure that the new scales are not contaminated by social desirability. The correlation between the AEQ and the Marlow-Crowne was significantly negative ( $r = -.20$ ;  $p < .001$ ). For both of the AEQ subscales the correlation with the Marlow-Crowne was similarly negative and significant. For the ambivalence over expressions of positive emotion subscale, the correlation was  $-.16$  ( $p < .01$ ) and for the ambivalence over expression of emotions of entitlement the correlation was  $-.22$  ( $p < .01$ ). The correlation between the EEQ and the Marlow-Crowne was also negative ( $r = -.11$ ;  $p < .03$ ). For the three expressiveness subscales, correlations with the Marlow-Crowne were negative but nonsignificant.

As a test of convergent validity, correlations between scores on

the AEQ, its subscales and the Raulin Intense Ambivalence scale were computed. As expected, the AEQ was significantly positively correlated with the Raulin I-A scale ( $r = .35$ ;  $p < .001$ ). The subscale measure of ambivalence over expressions of love was also significantly positively correlated with the Raulin I-A scale ( $r = .32$ ;  $p < .001$ ) as was the subscale for ambivalence over expressions of entitlement ( $r = .30$ ;  $p < .001$ ).

#### Sex differences

Pearson correlation coefficients were computed between sex of subject and scores on the EEQ, AEQ, and the respective cluster scores for these two scales. Because female was coded as 2 and male as 1, positive correlations indicate that women scored higher on the scale in question. As was predicted, women scored significantly higher on the EEQ than did men ( $r = .15$ ;  $p < .005$ ). The mean for women on the EEQ was 4.72 while the mean for men was 4.47. Also as expected, women reported themselves as more expressive of positive emotion and intimacy ( $r = .14$ ;  $p < .009$  and  $r = .17$   $p < .002$ , respectively). Contrary to predictions men were not more expressive of negative emotions than women although the correlation was in the predicted direction ( $r = -.06$ ; n.s.).

With regard to the AEQ, predictions were partially supported. Women scored significantly higher than men on the AEQ ( $r = .10$ ;  $p < .05$ ). The mean for women on the AEQ was 2.99 while the mean for men was 2.88. However, with regard to the subscale scores predictions were not supported. It had been predicted that men would be more ambivalent than women over the expression of positive emotions while women would be more ambivalent over the expression of entitlement

emotions. Contrary to predictions, women scored higher than men on the ambivalence over expression of positive emotion subscale ( $r = .11$ ;  $p < .03$ ) while there was no sex difference on the ambivalence over emotions of entitlement subscale ( $r = .03$ ; n.s.).

Table 7

Correlations for EEQ, AEQ and Cluster scores, Sample 1

	1.	1a.	1b.	2.	2a.	2b.
1. AEQ	—					
1a. Positive	.79	—				
1b. Entitlement	.88	.71	—			
2. EEQ	-.24	-.31	-.10	—		
2a. Negative	-.19	-.21	-.08	-.09	—	
2b. Positive	-.12	-.05	.03	-.03	.81	—
2c. Intimacy	-.30	-.40	-.15	-.11	.76	.81

Note. For  $N = 292$ ,  $r's \geq .10$  are significant ( $p < .05$ );  $r's \geq .13$  are significant ( $p < .01$ ).

#### Correlations between the AEQ and EEQ

Table 7 shows the correlations between the AEQ, its subscales and the EEQ and its subscales. It was predicted that the two scales would be negatively correlated and this prediction was born out ( $r = -.24$ ). The ambivalence over expressing love subscale was negatively correlated with the EEQ and the expression of negative emotion and intimacy subscales, however it was not correlated with the expression

of positive emotion subscale. The ambivalence over expression of entitlement subscale was significantly negatively correlated with the EEQ, and the expression of intimacy subscale but was not significantly correlated with either the expression of negative emotion or expression of positive emotion subscales.

Several conclusions can be drawn from the results of Study 1. First of all while the AEQ is best characterized as unidimensional, the EEQ taps three different subsets of expressiveness: expression of positive emotions, expression of negative emotions and expressions of intimacy. The factor structure of the EEQ is not surprising, given that the experience of positive and negative emotion has been conceptualized as independent (Diener & Emmons, 1985). Whether or not the individuals experienced differing degrees of positive emotions or negative emotions cannot be addressed by Study 1, however. The question of whether individuals who feel more of a particular quality of emotion express more of that emotion remains to be addressed.

Predictions about the other analyses in Study 1 were confirmed for the most part although there were some important exceptions. Neither the AEQ nor the EEQ was positively correlated with social desirability. These scales were, in fact, negatively correlated with the Marlow-Crowne scale. This negative correlation indicates that for an individual to score highly on the AEQ he or she must be willing or able to admit to negative affect. This conclusion is a sensible one although it is important to note that it reveals one weakness of the AEQ measure. The AEQ does not tap into the ambivalence that may be felt by individuals who do not or cannot admit to experiencing

negative affect. This conclusion would indicate that the scale cannot, for instance, uncover unconscious conflict over expression. The AEQ requires an openness to the awareness of negative affect in one's life. This shortcoming may not be fatal, however. Emmons and King (1988) have demonstrated the implications of conscious conflict for psychological and physical well-being. Still, it will be important to bear in mind that the AEQ does not purport to measure unconscious conflict or negative affect which an individual will not acknowledge.

The negative correlation between the EEQ and the Marlow-Crowne is somewhat more puzzling than the negative correlation between the AEQ and the Marlow-Crowne. In order to further examine this correlation, Pearson correlation coefficients were computed between all of the items in the EEQ and the Marlow-Crowne. Five of the 16 items were negatively correlated with the Marlow-Crowne. Two of these items concerned laughing (23 and 10 in Appendix A). One concerned facial expressions (12 in Appendix A), one apologizing (14 in Appendix A), and one love (8 in Appendix A). The correlation with the apologizing item makes some sense in that in order to respond positively to that item one must admit to a wrongdoing—something that would not be expected from one scoring highly on the Marlow-Crowne. However, with regard to the laughter, facial expressions and love items the negative correlation is not as easily understood. Perhaps these correlations can be best described in terms of self-disclosure. Emotional expression has previously been discussed in terms of self-disclosure. It is likely that one who scores highly on the Marlow-Crowne is not



very self-disclosive. In fact, by responding positively to the items in the Marlow-Crowne individuals are not being self-disclosive and so the negative correlation with a measure of expressiveness, the EEQ, is not only reasonable--it might have been expected.

The AEQ was significantly positively correlated with the Raulin I-A scale, suggesting that it also taps ambivalence. It is important to note, however, that the AEQ is not simply equivalent to the Raulin scale. In the first place, the two scales were highly correlated but not perfectly correlated. Secondly, these scales did not behave in a perfectly parallel manner when correlated with the EEQ. Although the Raulin I-A scale was negatively correlated with the EEQ ( $r = -.12$ ;  $p < .05$ ), this correlations was not as strong as the correlation between the AEQ and the EEQ. While the Raulin I-A scale taps intense ambivalence in general, the AEQ taps specifically ambivalence over emotional expression.

With regard to the third prediction, concerning sex differences, only the first general statement was wholly supported. Women were more expressive of intimacy than men and more expressive of positive emotion than men. As predicted women were more ambivalent over inhibition of expression, even though they were more expressive. These results support the idea that women are less comfortable than men with inexpressiveness as an emotion management strategy. Also, these results suggest that, as postulated earlier, although men are less expressive, they may be comfortable within their inexpressiveness. It should be noted here that there was no sex difference in scores on the Marlow-Crowne. Thus, the differences in

expressiveness and ambivalence over expression between male and female subjects is not likely to be due to a male reluctance to self-disclose or to admit to negative affect. Predicted sex differences did not emerge with regard to the expression of negative emotion.

The predictions for sex differences in ambivalence over expressions of negative emotions and love were also not supported. Results indicated that women were more ambivalent than men about expressions of love and about inhibition, while no sex difference emerged with regard to emotions of entitlement. These results suggest that individuals who are highly expressive of certain emotions are ambivalent about those very emotions. Thus, rather than being occupied by problems with the emotions about which one is inexpressive, individuals seem to worry more about those emotions they do express.

As was predicted, the AEQ and the EEQ were negatively correlated. This correlation suggests that individuals who are ambivalent about expression tend to be inexpressive. This correlation may explain why nonexpression has been associated with ill-being in past research. It may be that individuals who seem to suffer the adverse consequences traditionally associated with nonexpression are actually suffering from the consequences of ambivalence. This statement supports the contention made earlier that ambivalence may help to separate those who are healthily inexpressive from those who are actually inhibited. Such a statement must be taken as mere conjecture, given the scope of Study 1. While the first study makes no strong claims about the relative importance of expression and

ambivalence to well-being, the second study will address this issue more directly.

### Study 2: Application

The purpose of the second study was to determine whether or not the ambivalence over emotional expressiveness scale, the emotional expressiveness scale and the factors which emerged in Study 1 predict well-being. Literature reviewed previously presents equivocal results pertaining to the relationship between expression and well-being. The second study will examine the contributions of expression and ambivalence over expression to psychological and physical well-being. In this study, scores on the AEQ, the EEQ and two other measures of expressiveness, peer ratings and the Affective Communication Test (A.C.T.; Friedman, Prince, Riggio, and DeMattea, 1980) will be used to predict psychological and physical well-being as measured by self-report questionnaires, daily reports of mood and physical well-being, as well as objective measures of physical symptomatology. Because of the low number of men participating, gender differences will not be addressed in the second study.

### Predictions

1. AEQ, EEQ and mood measures. The AEQ is predicted to be positively associated with negative mood. The AEQ is predicted to be negatively associated with positive mood, based on the rationale that ambivalence may lead to inhibited expression and that expression feeds back into emotional experience. Thus, individuals who inhibit expression of positive emotion should experience less positive emotion. Scores on the EEQ, the A.C.T., and peer ratings of expressiveness are not

predicted to be related to daily mood.

2. Questionnaire measures of psychological well-being. It is predicted that AEQ scores will be positively correlated with measures of ill-being and negatively correlated with measures of positive well-being. Because expressiveness may be correlated with extraversion, scores on the three measures of expressiveness are predicted to show a positive correlation with positive affect, but, as has been argued previously, scores on the expressiveness measures should not be correlated with measures of negative affect. These predictions are in keeping with the rationale that expressiveness itself is no insulation against the adverse psychological consequences which have been associated with inexpressiveness

3. Measures of physical symptomatology. With regard to physical symptoms, scores on the AEQ are predicted to be positively correlated with daily symptom scores, scores on questionnaire measures of symptoms, the number of Health Center visits, and the number of different illnesses. Expressiveness scores are predicted to show no relationship with these symptom indices.

#### Method

Subjects. A sample of 48 Michigan State University undergraduates (35 females and 13 males) participated in a 10-week long course and research project entitled, "Research on Goals, Mood, and Health." Subjects were from various academic levels and in various courses of study. They were recruited via announcements posted in the psychology department. Participation was open to virtually anyone and participants received 3 hours of course credit. Although subjects

were undergraduates they came from various age groups. Among the women, the age range was 19 to 47, with 5 of the subjects falling between age 33 and 47. The mean age for female subjects was 23.3 years. Among the men, ages ranged from 19 to 27. The mean age for male subjects was 21.6.

### Procedure

#### Mood Reports

Daily mood reports were completed by the subjects for 21 consecutive days. Two forms were completed each day, one at the "middle" of the subject's day (usually in the mid to late afternoon) and one before the subject went to sleep. These mood reports consisted of a list of adjectives describing various positive and negative emotions (happy, joyful, pleased, enjoyment/fun, unhappy, angry, anxious, depressed, and frustrated). The adjectives listed on these reports were chosen on the basis of earlier factor analytic work by Diener and Emmons (1984). Subjects rated the extent to which they had experienced the emotion listed during the part of the day prior to completion of the form on a 6-point scale with 1 indicating "not at all" and 6 indicating "extremely much". The ratings on the positive affect adjectives were summed over the 21 days to produce a composite positive affect score and the ratings on the negative affect adjective were summed to produce a composite negative affect score. These composite scales have been utilized in other studies (see Diener, 1984 for a review) and their temporal reliability and internal consistency coefficients approach .90.

#### Psychological Well-Being Measures

During the first weeks of the term-long study, subjects completed

a several questionnaires measuring psychological well-being. These questionnaires included the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) which measures psychological symptoms on several dimensions, including Depression, Guilt, Anxiety, Paranoia, Phobias, and Obsessive-Compulsive tendencies. Subjects also completed the well-being scale from the Differential Personality Questionnaire (DPQ; Tellegen, 1979), the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, and Griffin, 1985), Rosenberg's Self-Esteem Scale (Rosenberg, 1963) and a revised version of the Bradburn Affect Balance scale (Bradburn, 1969; revised by Warr, Barter, & Brownbridge, 1983), which assesses the extent to which the respondent has recently experienced positive and negative affect. The Beck Depression Inventory was also completed by subjects as a further measure of psychological ill-being. Also presented at this time was the Affective Communication Test (A.C.T.; Friedman, Prince, Riggio, DeMattea, 1980) a measure of emotional expressiveness.

#### Physical Symptomatology

Five different measures of physical symptoms were obtained for these subjects. First, subjects completed the Pennebaker Inventory of Limbic Languidness (PILL; Pennebaker, 1982) a questionnaire measure of common physiological symptoms. Second, subjects completed the Somatization scale from the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). Third, the daily mood reports included a symptom checklist. Subjects checked the symptoms which they had experienced on the given day. The symptoms listed on the daily reports included, headaches, stomach ache/pain, chest pain,

runny/congested nose, coughing/sore throat, faintness/dizziness, out of breath, acne/pimples, and stiff/sore muscles. The nine categories were chosen based upon factor analytic work on a large list of physical symptoms (Pennebaker, 1982). Friedman & Booth-Kewley (1987) state that stomach ache/pain, chest/heart pain, out of breath, and sore/stiff muscles can be considered precursors to serious illnesses which have also been related to emotion: ulcers, heart disease, asthma, and arthritis. These symptom reports were summed over all days to create a global symptom score for each subject.

Subjects were asked to sign a consent form giving the experimenters permission to access their health records at the University health center. Subjects were assured that their records would be kept completely confidential. Given these records, a rater, blind to the subjects' ambivalence scores, counted the number of visits made to the health center as well as the number of different illnesses diagnosed in the past year. The fourth and fifth measures of symptomatology were provided by these two counts, of health center visits and of different illnesses. The number of visits ranged from 0 to 18, with a mean of 2.89 and a standard deviation of 4.35. The number of illnesses ranged from 0 to 10, with a mean and standard deviation of 1.81 and 2.19 respectively.

#### Peer reports

Lastly, subjects provided the names and addresses of individuals who knew them well. These individuals were contacted and asked to complete a a brief packet of questionnaires. Included in this packet was a 6-item expressiveness scale ( $\alpha = .59$ ) about the subjects. These "peer ratings" of expressiveness provided an additional measure

of expressiveness. All subjects were asked to provide 10 addresses. Only those subjects for whom at least 2 peers responded to the mailer were used in peer rating analyses. The total number of peers responding was 207. The number of peers per subject returning the packet ranged from none to 10. The mean number of peers per subject was 4, with a standard deviation of 1.9. Of the individuals who completed and returned the peer questionnaire 58% were friends, 14% were parents, 13% were other relatives, 4% were boyfriends or girlfriends, and 11% shared some other relationship with the subject. Three subjects were eliminated from analyses involving peer data because of lack of peer respondents.

### Results and Discussion

Three sets of analyses were performed on the data collected in Study 2: 1) Correlations for measures of expressiveness and ambivalence of expressiveness were computed to see if the correlations from Study 1 replicate. 2) Pearson correlations well-being measures and AEQ and expressiveness measures were computed. 3) Partial correlations of AEQ and EEQ scores as predictors of symptoms, ill-being, negative affect, positive affect and positive well-being were computed.

The means for the AEQ and the EEQ for Study 2 were comparable to those for Study 1, 2.84 for the AEQ and 4.33 for the EEQ. The AEQ had a standard deviation of .60 and the EEQ standard deviation was .63. Correlations between the EEQ, the A.C.T. and the AEQ are presented in Table 8. The EEQ and the A.C.T. were significantly positively correlated. Pearson correlations were also computed within peer



ratings so that the each subjects' self reported expressiveness could be compared with each of his or her peers' estimates of expressiveness. Peer ratings of expressiveness were significantly positively correlated with scores on the EEQ ( $r = .43$ ;  $p < .001$ ,  $N = 207$ ) and scores on the A.C.T. ( $r = .21$ ;  $p < .01$ )

For the AEQ and the EEQ, results were similar to Study 1, ( $r = -.25$ ;  $p < .05$ ). However, the A.C.T. was not significantly correlated with the AEQ. Peer ratings of expressiveness were significantly negatively correlated with the AEQ ( $r = -.31$ ;  $p < .001$ ).

Table 8

Correlations for AEQ, Cluster Scores  
and Expressiveness Measures, Sample 2

	1.	2.	3.
1. AEQ	—		
2. EEQ	-.25	—	
3. Peer Rating	-.31	.43	—
4. A.C.T.	-.08	.36	.21

Note. For all but the peer ratings of expressiveness,  $N = 48$ . For  $N = 48$ ,  $r \geq .24$  are significant ( $p < .05$ );  $r \geq .33$  is significant ( $p < .01$ ). For peer ratings,  $N = 207$ ,  $r \geq .10$  is significant,  $p < .05$  and  $r \geq .16$  is significant,  $p < .01$ ;

Table 9  
Correlations between Measures of Psychological Well-Being

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PA	--													
2. DPQ	.34	--												
3. SWLS	.28	.67	--											
4. B.Pos.	.14	.39	.32	--										
5. NA	-.20	-.26	-.22	.09	--									
6. BDI	-.15	-.34	-.54	-.09	.52	--								
7. B.Neg.	-.39	-.30	-.16	-.08	.29	.51	--							
<u>Hopkins</u>														
8. O.C.	-.32	-.26	-.20	-.20	.14	.36	.52	--						
9. Dep.	-.43	-.45	-.53	-.19	.37	.76	.59	.56	--					
10. Anx.	-.43	-.40	-.22	-.03	.27	.32	.52	.63	.61	--				
11. Phob.	-.14	-.39	-.54	-.12	.23	.34	.40	.32	.48	.52	--			
12. Para.	-.40	-.46	-.44	-.21	.23	.52	.44	.51	.64	.62	.51	--		
13. Guilt	-.21	-.24	-.29	-.01	.30	.60	.53	.67	.69	.77	.50	.50	--	
14. Psychot.	-.41	-.42	-.46	-.25	.25	.60	.46	.51	.85	.63	.50	.51	.67	--
15. G. Sev.	-.44	-.48	-.44	-.18	.32	.59	.56	.73	.82	.85	.66	.84	.83	.84

Note. For  $N = 48$ ,  $r > .24$  are significant ( $p < .05$ );  $r > .33$  are significant ( $p < .01$ ). PA = Daily positive affect; DPQ = Well-being scale from the Differential Personality Questionnaire; SWLS = Satisfaction with Life Scale; B. Pos. = Bradburn Positive Affect; NA = Daily negative affect; BDI = Beck Depression Inventory; B. Neg = Bradburn Negative Affect Scale. For Hopkins measures: O.C. = Obsessive Compulsive; Dep. = Depression; Anx. = Anxiety; Phob. = Phobia; Para. = Paranoia; Psychot. = Psychoticism.

Ambivalence over expression, expressiveness and psychological well-being

Correlations for the measures of psychological well-being are shown in Table 9. Generally all of the measures of positive well-being were positively correlated and the measures of ill-being were positively correlated with each other. As would be expected, measures of positive well-being were negatively correlated with measures of ill-being.

Pearson correlation coefficients were computed for measures of psychological well-being, the AEQ and the measures of expressiveness. The results are shown in Table 10. Generally, the AEQ was negatively associated with measures of psychological well-being and positively associated with measures of psychological ill-being, as predicted. The AEQ correlated significantly negatively with life satisfaction as measured by the SWLS and with self-esteem as measured by the Rosenberg Scale.

Positive correlations were found for the AEQ and daily negative affect, obsessive/compulsive tendencies, depression, paranoia, and phobias. Ambivalence over emotional expression was also positively associated with depression as measured by the Beck Depression Inventory and with negative affect as measured by the Bradburn Affect Balance Scale. In sum, the AEQ behaved largely as predicted, correlating positively with measures of poor functioning and negatively with measures of healthy functioning.

With regard to measures of expressiveness, correlations also emerged as predicted. The EEQ correlated significantly positively with

the DPQ measure of well-being ( $r = .27$ ;  $p < .04$ ) and positive affect as measured by the Bradburn Affect Balance scale ( $r = .24$ ,  $p < .05$ ). Peer ratings of expressiveness correlated significantly positively with the DPQ as well. In terms of ill-being, the EEQ was positively associated with daily reported negative mood ( $r = .23$ ,  $p = .06$ ), anxiety ( $r = .25$ ;  $p < .05$ ) and guilt ( $r = .24$ ,  $p < .05$ ). Peer ratings of expressiveness did not correlate with measures of ill-being. The A.C.T. did not correlate significantly with any of the measures psychological functioning. To summarize, the measures of expressiveness were generally uncorrelated with well-being measures, although some correlations did emerge for positive functioning and expressiveness. Those correlations that existed between expression and ill-being were positive not negative as would be predicted by a perspective emphasizing expression per se as healthy.

Table 10

Correlations Between Measures of Expressiveness,  
Ambivalence over Expression, and Psychological Well-Being

<u>Well-Being Scale</u>	<u>EEQ</u>	<u>A.C.T.</u>	<u>PR</u>	<u>AEQ</u>
PA	.05	-.08	-.02	-.06
DPQ	.27	.05	.30	-.19
SWLS	.19	.03	.03	-.25
Self-Esteem	-.03	-.03	.09	-.40
Bradburn Positive	.24	-.02	-.07	.05
NA	.23	.19	-.05	.28
Beck Depression	-.02	.09	-.05	.39
Bradburn Negative	.10	.01	-.05	.24
<u>Hopkins</u>				
Obs/Com	.11	-.03	-.10	.42
Phobia	-.04	.02	-.10	.31
Paranoia	-.06	.08	-.16	.40
Depression	.16	.14	.04	.26
Anxiety	.25	.07	.05	.15
Psychoticism	.05	.19	-.03	.26
Guilt	.24	-.13	-.03	.30

Note. EEQ = Emotional Expressiveness Questionnaire; A.C.T. = Affective Communication Test; PR = peer rated expressiveness; AEQ = Ambivalence over Expression Questionnaire; PA = Daily positive affect; DPQ = Well-being scale from the Differential Personality Questionnaire; SWLS = Satisfaction with Life Scale; B. Pos. = Bradburn Positive Affect; NA = Daily negative affect. For  $N = 48$ ,  $r \geq .24$  is significant ( $p < .05$ );  $r \geq .33$  is significant ( $p < .01$ ). For peer ratings,  $N = 207$ ,  $r \geq .11$  is significant ( $p < .05$ ) and  $r \geq .16$  is significant ( $p < .01$ ).

Ambivalence over expression, expressiveness, and physical well-being.

Correlations between the measures of physical complaints are reported in Table 11. Although the questionnaire measures of physical symptomatology were all positively correlated, only the PILL was related to the number of illnesses with marginal significance ( $p < .06$ ). None of the questionnaire measures of physical ill-being were significant predictors of health center visits.

Table 11

Correlations for the Measures of Physical Symptomatology

	1.	2.	3.	4.
1. Average Daily Symptoms	—			
2. Health Center Visits	.07	—		
3. Number of illnesses	-.06	.81	—	
4. PILL	.23	.11	.22	—
5. Somatization	.36	-.01	.11	.26

Note. PILL = Pennebaker Inventory of Limbic Languidness;

Somatization = Somatization Scale from the Hopkins Symptom

Checklist; Inventory. For  $N = 48$ ,  $r \geq .24$  are significant ( $p < .05$ );  $r \geq .33$  are significant ( $p < .01$ ).

Pearson product-moment correlations were also computed for the measures of physical symptomatology and the measures of psychological well-being. These correlations are presented in Table 12. Generally, the measures of negative affect and psychological ill-being were positively correlated with questionnaire measures of physical symptomatology. Daily symptoms were positively correlated with daily negative affect, the BDI, the obsessive-compulsive, anxiety, and depression subscales from the Hopkins Symptom Checklist. Health center visits were positively correlated with the Bradburn negative affect scale. The number of different illnesses was positively correlated with the BDI, the Bradburn negative affect scale and the obsessive-compulsive and depression subscales from the Hopkins Symptom Checklist.

Questionnaire measures of positive affect and well-being were negatively associated with the General Severity Index and the Somatization subscale from the Hopkins. Daily positive affect was significantly negatively correlated with the PILL. Daily symptoms were not correlated with any of the measures of positive affect. Health Center visits and the number of different illnesses were negatively correlated with daily positive affect.

Table 12

## Correlations Between Measures of Physical and Psychological Well-being

	<u>Somat.</u>	<u>PILL</u>	<u>Daily</u>	<u>HCV</u>	<u>Illnesses</u>
PA	-.10	-.32	.07	-.24	-.24
DPQ	-.35	.02	-.03	.08	.01
SWLS	-.22	-.07	.07	-.01	-.03
Self-esteem	-.30	-.10	-.04	-.13	-.16
Bradburn Positive	-.13	.04	.09	.10	.09
NA	.32	.32	.39	.16	.18
Beck Depression	.31	.21	.31	.14	.26
Bradburn Negative	.22	.22	.10	.24	.37
G. Sev.	.65	.43	.23	.07	.16
<u>Hopkins</u>					
Obs/com	.57	.35	.30	.06	.26
Phobia	.46	.32	.10	-.17	-.05
Paranoia	.40	.20	.09	-.08	.03
Depression	.40	.37	.16	.19	.32
Anxiety	.62	.36	.26	.04	.19
Psychoticism	.29	.36	.08	.02	.16
Guilt	.29	.40	.29	-.10	.07

Note. Somat. = Somatization Scale from the Hopkins Symptom Checklist;

PILL = Pennebaker Inventory of Limbic Languidness. PA = Daily positive affect; DPQ = Well-being scale from the Differential Personality Questionnaire; SWLS = Satisfaction with Life Scale;

NA = Daily negative affect; G. Sev. = Index from the Brief Symptom Inventory. For  $N = 48$ ,  $r \geq .24$  are significant ( $p < .05$ );  $r \geq .33$

are significant ( $p < .01$ ).



Table 13

Correlations between Measures of Expressiveness,  
Ambivalence Over Expression, and Physical Symptoms

<u>Symptom Measures</u>	<u>Expression Scale</u>			
	<u>EEQ</u>	<u>A.C.T.</u>	<u>PR</u>	<u>AEQ</u>
Somatization	.19	-.01	-.07	.20
PILL	.05	-.05	.12	.18
Mean Daily Symptoms	.09	.00	.00	.06
Health Ctr. Visits	.21	.07	.07	-.08
Number of Illnesses	.12	-.06	-.01	.09

Note. EEQ = Emotional Expression Questionnaire; A.C.T. = Affective Communication Test; PR = Peer ratings of expressiveness; AEQ = Ambivalence Over Expression Questionnaire; Somatization = Somatization Scale from the Hopkins Symptom Checklist; PILL = Pennebaker Inventory of Limbic Languidness. For all variables except the peer ratings,  $N = 48$ . For  $N = 48$ ,  $r \geq .24$  is significant ( $p < .05$ );  $r \geq .33$  is significant ( $p < .01$ ). For peer ratings,  $N = 207$ ,  $r \geq .11$  is significant ( $p < .05$ ) and  $r \geq .16$  is significant ( $p < .01$ ).

Pearson correlation coefficients were computed for the expressiveness measures and the 5 measures of physical complaints. These correlations are presented in Table 13. While the questionnaire

measure of symptomatology was correlated with the AEQ, the objective measures of physical distress (i.e., number of health center visits and number of illnesses) were not correlated with either expressiveness or ambivalence over expression. Daily symptom reports were not associated with either expressiveness or ambivalence. One surprising, though only marginally significant result is that the EEQ was positively correlated with health center visits ( $r = .21$ ;  $p < .1$ ).

In order to further test the predicted relationships between ambivalence over expression and expression, partial correlations were computed between the various measures of physical illness and the AEQ partialling out the influence of first the EEQ then the A.C.T. and both of these measures of expressiveness. The results of these partial correlations were not as expected. Although the correlations between the AEQ and the questionnaire measures of symptomatology remained positive, no correlations emerged between daily symptoms, health center visits or number of illnesses.

Next, a median split was performed on the scores on the AEQ and EEQ in order to test the relationships proposed in Figure 3. Two (high vs low ambivalence over expression) by two (high vs low expressiveness) analyses of variance were conducted for each measure of symptomatology as a dependent variable. A main effect for ambivalence over expression was expected, however, no significant effects were found. Last, a similar procedure was used, this time using only the upper and lower thirds of scores on the AEQ and EEQ. Subsequent analyses of variance revealed no significant effects. Analyses were repeated using only female subjects and only those subjects within a traditional college

age range (i.e., < 26 years). Once again, neither ambivalence over expression nor expression predicted health status.

To summarize, the results of the second study can be divided into two parts, the results pertaining to the relationships between expressiveness, ambivalence over expression and psychological well-being and the results pertaining to expression, ambivalence over expression and physical well-being. With respect to the former, results were basically as expected. Expressiveness correlated with some measures of positive well-being but did not correlate negatively with measures of psychological ill-being. The positive correlation between the EEQ and measures of negative affect runs directly contrary to the thesis that expression is a positive, advantageous behavior in and of itself. These positive correlations are somewhat surprising and three explanations will be suggested for this finding. The first two explanations assume that the self-reports of negative affect do in fact reflect differences in affective experience between expressive and inexpressive individuals. The positive correlations between the measures of lowered psychological functioning and expressiveness may be explained via the feedback relationship that has been postulated as existing between expression and emotional experience (e. g., Laird, 1974). Individuals who are very expressive of emotions in general should experience more of all of these emotions—positive and negative. An alternative explanation would be that individuals who are expressive actually feel more negative affect because of their expressive behaviors. That is, given the previous discussion of the cultural disdain for emotional display, it is no wonder that these

individuals may experience embarrassment, shame, or guilt over their expression. A final explanation for these positive correlations does not assume that the correlations reflect real differences in affective experience between expressive and inexpressive individuals. The positive correlation between measures of ill-being and expression may be due to the fact that reporting negative affect is, itself, an expressive behavior. Thus, individuals who are expressive of their emotional states are more likely to report their negative affect than inexpressive individuals—regardless of whether there is any difference in the affective experience of these two groups. The data collected in the two studies presented here is not sufficient to confirm or discount these three possibilities. In any case, the positive correlations themselves do at least cast some doubt on the idea that expressive individuals are more emotionally healthy than inexpressive individuals.

Ambivalence over expression, on the other hand, was consistently correlated with measures of poor psychological functioning. It also correlated negatively with some measures of psychological well-being. These correlations are in keeping with initial predictions. A comparison of the AEQ and the measures of expressiveness illustrates the accuracy of the contention that expressiveness alone can reveal little about an individual's psychological health status. Expressiveness did not show a negative relationship with measures of ill-being. On the contrary, ambivalence over expression did correlate with ill-being. Thus, these results support the thesis that expression of emotion provides no insulation against the kinds of adverse psychological consequences that have been traditionally associated with

inexpressiveness.

The second set of results pertains to the relationships between expression, ambivalence over expression and physical health. As predicted, expressiveness was generally not associated with measures of health status, supporting further the contention that expression of emotion is not the key to healthy emotion management. Indeed, expressiveness as measured by the EEQ was positively correlated with health center visits. This rather startling finding will be discussed further below. Ambivalence over expression was positively correlated with questionnaire measures of symptoms, as predicted. However, contrary to predictions, ambivalence over expression showed no relationship with health center visits or number of different illnesses.

The finding that the EEQ was positively associated with health center visits while the AEQ was not deserves special consideration here. This unexpected result can be explained through research that has been conducted in the area of health psychology, focusing on symptom reporting and healthcare seeking. Research has demonstrated that there is considerable variation in symptom perception, experience and interpretation (Rosenstock & Kirscht, 1979). Zola (1972, cited in Rosenstock & Kirscht) reported differences in Italian Americans and Irish Americans in their symptom reportage. Italian Americans tended to exaggerate symptoms while Irish Americans tended to "suffer in silence". Although there are many obvious cultural differences between these two groups, within the context of this study one of these differences—emotional expressiveness—warrants consideration. If

symptom reporting is thought of as an expressive behavior then the lack of correlation between symptom reports and the AEQ is understandable. This conceptualization of symptom reporting also offers further explanation for the positive correlation between health center visits and expressiveness.

Research in health psychology also casts a different light on the variable of health center visits as a measure of psychological well-being rather than physical ill-being. Within the field of health psychology, the concept of "readiness to use services" or "orientation to care" (Rosenstock & Kirscht, 1979) has been used to describe the seeking out of treatment for symptoms. Psychological readiness involves the belief that one's health is within one's control and that health professionals and services are a means of maintaining one's good health. Rosenstock and Kirscht describe this concept as the inverse of helplessness (p. 178). In light of the concept of "orientation to care," reexamination of the results of Study 2 with regard to ambivalence over expression the predicted positive relationship between the AEQ and health center visits makes much less sense than the lack of relationship that emerged.

### General Discussion

It may be helpful to begin this discussion with a recap of the major findings from both studies. The first important finding for Study 1 was the unidimensionality of the AEQ. The positive correlation between the AEQ and the Raulin I-A scale as well as the negative correlation between the AEQ and the EEQ lend support to the idea that the AEQ taps ambivalence over emotional expression. Also, in Study 1, it had been predicted that women would be more expressive and more ambivalent over expression than men. This prediction was supported, with the added consideration that women were more expressive of and ambivalent over positive emotions. Among the major findings of Study 2 were the relationships between the AEQ and questionnaire measures of psychological ill-being and physical symptoms and the absence of a relationship between expressiveness and these measures of ill-being. Also of importance in Study 2 was the lack of relationship between health center visits, number of illnesses and expressiveness or ambivalence over expression.

The first of these findings to be addressed here is the sex differences found in Study 1. Given the previous discussion of gender differences in expression it seems appropriate at this time to attempt to integrate the present provocative findings with past research. While researchers in the area of sex differences in emotional expression have focused on anger and negative emotions as a stumbling block for women (e. g., Hochschild, 1975; Bernardez-Bonesatti, 1978; Sheilds, 1987), the current results indicate that it was positive

emotions about which women were more expressive and more ambivalent. Perhaps the best point of entry for this discussion is to consider the conflict that may underlie the ambivalence felt by women with regard to positive emotion. The importance of the feminine role of nurturer has been discussed previously. Hochschild (1975) has suggested that women are placed in a conflictful situation routinely as a result of cultural expectations of nurturance and situational demands for neutrality or emotional detachment. The present results would support her contention. Our subjects may have been reacting to this kind of conflict--the desire to function successfully in a nontraditional role while at the same time deal with demands to be expressive of care and support for others. It is interesting to note as well that the subjects participating in the first study were all college women--those who can be said to be trying at least to some extent to balance that traditional female role with individual ambitions. It may be that for these young women, it is not negative emotion that causes problems but positive emotions--those that may seem inappropriate to their career concerns but which are part and parcel of traditional femininity.

A second possible explanation for the sex difference in ambivalence over expression is female ignorance of display rules for nonexpression. Previously presented research on the development of facial expressions and display rule knowledge suggests that female infants are exposed to a wider variety of expressions while male infants are given more explicit training in the inhibition of expression. It may be that, because they are trained as children that nonexpression is an appropriate behavior, men are more comfortable than



women in not expressing any emotion at all. Remember that previously mentioned research has shown that women, not men, tend to value expressiveness (Shields, 1987). Because lack of expression is the status quo within a male dominated culture (Balswick, 1988), it is not surprising that women, who are more expressive would also feel more ambivalent. Interestingly, some of the items in the factor on which women scored higher than men pertained to the inhibition of expression. It would be fascinating to examine more closely the underpinnings of the sex differences that emerged in this study. Particularly, experimental manipulation studies are recommended so that causal inferences can be drawn. Future research in this area might involve experimental manipulation of opportunity to express emotions to see if women do feel more uncomfortable than men in situations which prohibit expression. Also, research might investigate whether lack of knowledge of situational demands for expression in a situation is related to heightened anxiety for men and women.

The results of Study 2 provide surprising evidence about the roles of expression and ambivalence over expression to well-being. Although it had been predicted that expression would not be associated with measures of well-being, this result contradicts many of our assumptions about expression and health. It may be that the most important result of this investigation is that expressiveness provided no insulation from the adverse consequences traditionally associated with inexpressiveness. These results underscore the need for more sophisticated views of emotional expression.

Perhaps the most straightforward result of the second study was the

relationship between ambivalence over expression and psychological distress. The AEQ was positively correlated with a number of measures of poor psychological functioning. Although the correlations could be taken as a whole to indicate that ambivalence over expression is associated, generally, with psychological pain. However, at least one of the correlations that emerged is specifically interesting, since it relates to research reviewed earlier by Beutler, Engle, Oro-Beutler, Daldrop, and Meredith (1986). Recall that in review it was concluded that the conflict over the expression of intense emotion was a common link between depression and chronic pain. The AEQ correlated very strongly with measures of depression. It would be profitable to utilize this scale in studies like those reviewed by Beutler, Engle, Oro-Beutler, Daldrop, and Meredith to further investigate the link between depression and conflict over expression. This also suggests a subject population for whom the AEQ could be a valuable tool.

While the AEQ correlated with measures of psychological distress and questionnaire measures of symptoms, it did not correlate with the number of illnesses suffered or with daily reported symptoms. Several explanations seem possible. The first explanation is, of course, that there is no relationship between ambivalence over expression and physical distress. This explanation would hold that ambivalence over expression is a purely psychological phenomenon that does not impact on physical well-being. While the existence of any such phenomenon would seem highly unlikely given the previous literature review on the relationship between expressiveness and health, it is still possible that this particular form of emotional turmoil is not physiologically

pathogenic. The second explanation is that ambivalence over expression is an emotional experience that requires time to impact on physical health. Longitudinal data on the individuals who were highly ambivalent over expression would demonstrate whether over time this ambivalence impacts on physical health.

A final explanation for the lack of correlation between the AEQ and physical symptoms is that while ambivalence over expression is associated with physical health, the current measures of ambivalence do not measure the construct adequately to uncover this relationship. Other measures of ambivalence might be preferable to the AEQ. For example, Emmons and King (1988) examined ambivalence as it related to idiographic personal strivings and found a relationship between ambivalence and health outcomes. A similar study stressing strivings about emotional expression might better tap the ambivalence over expression-symptomatology connection.

Several problems are apparent in the present studies and these deserve to be addressed here. One problem is that none of the health measures was truly objective. One issue that is brought to the forefront by this study is the question of how much self-reports of symptomatology are in themselves expressive behaviors. It has already been suggested that the correlation between health center visits and expressiveness may be due to differences between expressive and inexpressive individuals in symptom reporting. Thus, even health center visits are more subjective than might originally seem to be the case. What is called for here is a more objective methodology for assessing health status. Such a methodology might involve mandatory

physicals for all subjects as well as ambulatory heart and blood pressure monitoring and tests of immune functioning. Also galvanic skin response monitoring might be necessary, as Pennebaker (1985) had found this to be the best indicator of inhibition.

If there is one thing that is made obvious given the results of the present studies it is the unique challenge that lies before creators of measures of expressiveness. Two important problems can be seen to plague the measures of expressiveness used in this investigation and they are problems that are typical of measures of expressiveness. First of all, the EEQ, A.C.T. and peer ratings of expressiveness all confound expressiveness with emotional experience itself. Because these scales cover a variety of different emotions they assume that all subjects actually have felt the emotions mentioned. This is a dangerous assumption in that there may well be individual differences in frequency and duration of various affective states (Emmons & Diener, 1985). Recent investigations by Balswick (1988) have sought to avoid this pitfall by utilizing scales which include items which are worded in such a way as to separate types of emotions experienced from expression. Thus, an item like "I often tell people that I love them" from the EEQ would be reworded "When I feel love for someone I tell them often." Items about other emotions would also be prefaced with the phrase "When I do feel..." In this way, the items are less likely to confound emotional experience with expression of that experience. Balswick's scales provide good models for future measures of expressiveness.

The second problem with the measures of expression used in this investigation is that they ignore social context of expression. In none of these scales was the individual to whom an emotion was to be

expressed mentioned clearly. This disregard for social context presents an important problem, for it may be that individuals are more likely to confide in or express emotions to some individuals in their lives (e. g., spouse, therapist, parent, friend) than others (e. g., boss). Once again, Balswick (1988) provides a means by which social context of expression can be included and examined. In a recent study, Balswick had subjects fill out expressiveness questionnaires several times—for different individuals in their social environment. For instance, subjects would fill out the questionnaire once with regard to their spouse, again with regard to a friend, etc. Such a methodology would offer several benefits to researchers in the area of emotional expression. Not only would our knowledge of the importance of expressiveness benefit, but our knowledge of the adaptiveness of individual styles of expression would increase as well.

The current investigations suggest several avenues for future research, in terms of both improving the methodology in work on the ambivalence over expression construct and in defining the conceptual framework of emotion research. It is necessary that we begin to focus our research on emotional expression on the individual goals which underlie that expression. Also, emphasis on expression for its own sake is no longer justifiable. In addition, the use of measures of expressiveness alone in health psychology research will not accomplish the task of differentiating the healthy from the potentially unhealthy. These two statements are strongly supported by the present results.

There remains the need to work beyond the AEQ toward measures that

encompass social context and that will predict physical symptomatology. These new methods may include different questionnaires. Projective tests may also be necessary in order to tap the underlying ambivalence of those who are not able to consciously state their feelings of ambivalence over expression. Also, more idiographic, individualized methods may be helpful in assessing individual expressiveness styles and the adaptiveness of these styles.

A more idiographic way in which research can begin to address the meaning and importance of ambivalence and conflict over expressiveness goal strivings is to ask individuals why they feel ambivalent about certain personal strivings. It may be that it is not the ambivalence itself that is pathogenic but the situation that underlies the ambivalence. Perhaps, it is the case that only certain underlying constellations of emotions promote ill health or adverse emotional consequences. Two important emotions that might be considered are shame and guilt. Additionally, ambivalence that is fostered by goal conflict may be the kind that is most probably pathogenic. Emmons and King (1988) found that goal conflict is associated with poor health and psychological well-being. They surmised that conflict and ambivalence may be related—that individuals who experience chronic conflict may be prone to become ambivalent over certain goals. The underlying reasons for ambivalence may help determine if this is the case. Of particular interest here would be an examination of the reasons for ambivalence over strivings dealing with emotional expression.

A final point that is fittingly repeated here as a summary of the findings of this investigation is that expression in and of itself is

not the key to well-being. Rather, it may be how one feels about one's expressive behaviors that determines the potentially harmful character of lack of expression. There may be other components in the relationship between emotion and health. We must continue to look for those factors that separate inexpressiveness from inhibition—to distinguish between individuals who are expressive and healthy and those who are expressive and at risk for serious illness. This is a continuing challenge for researchers of emotional expression and health psychology. The construct of ambivalence over expression and one measure of it, the AEQ, are presented as a first step in meeting that challenge.

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## APPENDICES

## Appendix A

### EEQ

Using the 7-point scale below, indicate the extent to which you believe the statement characterizes you, by placing the appropriate number on the line preceding the item.

1	2	3	4	5	6	7
not at all characteristic	slightly	somewhat		moderately	very	extremely characteristic

- \_\_\_ 8. I often tell people that I love them.
- \_\_\_ 45. I show that I like someone by hugging or touching that person.
- \_\_\_ 36. I often touch friends during conversations.
- \_\_\_ 23. Watching television or reading a book can make me laugh out loud.
- \_\_\_ 10. I laugh a lot.
- \_\_\_ 1. When I am angry people around me usually know.
- \_\_\_ 12. People can tell from my facial expressions how I am feeling.
- \_\_\_ 30. Whenever people do nice things for me, I feel "put on the spot" and have trouble expressing my gratitude. (-)
- \_\_\_ 18. When I really like someone they know it.
- \_\_\_ 25. I often laugh so hard that my eyes water or my sides ache.
- \_\_\_ 22. When I am alone, I can make myself laugh by remembering something from the past.
- \_\_\_ 34. My laugh is soft and subdued. (-)
- \_\_\_ 29. If a friend surprised me with a gift, I wouldn't know how to react.
- \_\_\_ 14. I apologize when I have done something wrong.
- \_\_\_ 26. If someone makes me angry in a public place, I will "cause a scene."
- \_\_\_ 7. I always express disappointment when things don't go as I'd like them to.



## Appendix B

**AEQ**

Below and on the next few pages are statements that refer to typically occurring emotional reactions. We want you to decide how frequently you have felt like the thoughts being expressed in the statement, and then indicate this using the 5 point scale below.

1.....2.....3.....4.....

5

I have never  
felt like this

I frequently  
feel like this

The statement may consist of two thoughts. Carefully read the statement as a whole before deciding on how characteristic it is of you. For example, consider the item:

"I try to honestly criticize others for their own good, but I worry that they may get angry with me if I do so"

You would give this item a high rating if and only if you both try to honestly criticize others and worry about their getting angry. If you simply try to criticize others and you don't worry about their anger, or if you don't try to criticize others at all, then you would rate this item lower. It is important to consider the complete thoughts being expressed before you respond.

- \_\_\_ 1. I want to express my emotions honestly but I am afraid that it may cause me embarrassment or hurt.
- \_\_\_ 2. I try to control my jealousy concerning my boyfriend or girlfriend even though I want to let them know I'm hurting.
- \_\_\_ 3. I make an effort to control my temper at all times even though I'd like to act on these feelings at times.
- \_\_\_ 4. I try to avoid sulking even when I feel like it.
- \_\_\_ 5. When I am really proud of something I accomplished I want to tell someone, but I fear I will be thought of as conceited.
- \_\_\_ 6. I would like to express my affection more physically but I am afraid that others will get the wrong impression.
- \_\_\_ 7. I try not to worry others even though sometimes they should know the truth.
- \_\_\_ 8. Often I'd like to show others how I feel, but something seems to be holding me back.
- \_\_\_ 9. I strive to keep a smile on my face in order to convince others I'm happier than I really am.

1.....	2.....	3.....	4.....	5.....
I have never				I frequently
felt like this				feel like this

- \_\_\_10. I try to keep my deepest fears and feelings hidden, but at times I'd like to open up to others.
- \_\_\_11. I'd like to talk about my problems with others, but at times I just can't.
- \_\_\_12. When someone bothers me, I try to appear indifferent even though I'd like to tell them how I feel.
- \_\_\_13. I try to refrain from getting angry at my parents even though I want to at times.
- \_\_\_14. I try to show people that I love them, although at times I am afraid that it may make me appear weak or too sensitive.
- \_\_\_15. I try to apologize when I have done something wrong, but I worry that I will be perceived as incompetent.
- \_\_\_16. Often I find that I am not able to tell others how much they really mean to me.
- \_\_\_17. I want to tell someone when I love them, but it is difficult to find the right words.
- \_\_\_18. I would like to express my disappointment when things don't go as well as planned, but I don't want to appear vulnerable.
- \_\_\_19. I can recall a time when I wish that I had told someone how much I really cared about them.
- \_\_\_20. I try to hide my negative feelings around others, even though I am not being fair to those close to me.
- \_\_\_21. I would like to be more spontaneous in my emotional reactions but I just can't seem to do it.
- \_\_\_22. I try to suppress my anger, but I would like other people to know how I feel.
- \_\_\_23. It is hard to find the right words to indicate to others what I am really feeling.
- \_\_\_24. I worry that if I express negative emotions such as fear and anger, other people will not approve of me.
- \_\_\_25. I feel guilty after I have expressed anger to someone.
- \_\_\_26. I think about acting when I am angry but I try not to.

1.....2.....3.....4.....5  
I have never I frequently  
felt like this feel like this

- \_\_\_27. There have been times when I told someone I loved then  
only to later regret having done so.
- \_\_\_28. After I express anger at someone, it bothers me for a long  
time.