THE SOCIAL PSYCHOLOGY OF EMOTIONS:

PERCEIVING AND EXPLAINING OWN AND OTHER'S EMOTIONS

BY

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Shannon Howell

A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of Manitoba in partial fulfillment of the requirements of the degree of

DOCTOR OF PHILOSOPHY

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Abstract

The present program of research is aimed at examining the social psychological aspects of implicit theories of emotion. In pursuit of this goal, theory and research from the domains of attribution theory, social comparison theory, and gender stereotypes are reviewed and applied to the topic of emotion. Three studies are described, the purpose of which was to investigate perceptions and explanations of own and others' emotions, and to examine the extent to which gender as both a participant and stimulus variable affects perceptions of emotion. In Study 1, participants were asked to recall and describe four recent emotional experiences (anger, anxiety, happiness, and sadness) and to rate them on scales designed to measure factors related to both experience and expression of emotion; these included perceived intensity, locus of causality, appropriateness, consensus, and controllability. Results indicated the following: experiences were rated as more intense than expressions of emotion, and both were rated as generally appropriate; emotions were attributed to both external and internal causes; and participants reported feeling a moderate degree of control over their emotions. Overall, female participants rated their emotions as slightly more intense than did males. In Study 2, the emotion descriptions from Study 1 were transcribed and presented to new participants in a gender-neutral format in order to obtain "objective" ratings of the emotional situations. Results suggested that male and female participants in Study 1 described emotional situations that did not differ in objective intensity. The purpose of Study 3 was to investigate directly the influence of gender stereotypes on perceptions of emotions. In this study, emotion scenarios were created based on responses from the first two studies and on the results of an extensive pre-test. Target gender and response intensity were varied across the

scenarios, and perceived intensity, locus of causality, appropriateness, consensus, and controllability were assessed. Results revealed that observers' perceptions of emotions generally paralleled self-ratings from Study 1. Effects due to gender were minimal. Discussion focuses on the implications of the present findings for the everyday understanding of emotion, as well as on methodological considerations and future directions for this program of research.

The Social Psychology of Emotion:

Perceiving and Explaining Own and Others' Emotions

The overall purpose of the present program of research is to examine several of the most important social psychological aspects of experienced and observed emotions. Questions concerning social perceptions and explanations of emotion are worthy of serious attention at this time in view of the unique contributions such research can make to the accumulating body of theory and research directed at examining the everyday experience of emotions. Scientific concern with emotional experience has a long history within the field of psychology, and this interest continues largely because of the significance of emotion in everyday life. After all, emotional experience permeates almost all of the most significant events that occur in our lives. Fear, excitement, love, joy, rage, and grief are emotions that are experienced at one time or another in connection with important life events. Thus, emotions clearly are associated with some of the best and the worst that life has to offer.

Of course, in addition to the agony and the ecstasy of major events, it is apparent that everyday thoughts and occurrences also are coloured by the subjective experience that we call emotion. So, for example, we feel angry during traffic jams; we are happy to see good friends; we are saddened by tragic events reported in the news; and we become anxious prior to facing challenging tasks. Moreover, these emotions seem to influence strongly how we act in response to these events: we lean on the horn to get the flow of traffic moving; we arrange to meet our friends again; we change the channel to more cheerful programming; and we prepare vigorously to meet our challenges.

As further evidence of the centrality of emotion to the human condition, Oatley

(1998) points out that people do not just experience emotions, but also actively seek them out. This occurs when we read novels or watch movies and plays, because emotions are employed in the arts as the underpinnings of good drama. Thus, playwrights, authors, and artists of all kinds strive to evoke emotion in their audiences as a means of effective storytelling (Smith & Lazarus, 1990). Portrayals of emotion by fictional characters often provide information as to the characters' underlying traits and motivations, and this reflects the pervasive belief in the intimate relation between emotions and personality. Indeed, many of the trait terms that people use in everyday language to describe others, such as "caring," "cheerful," "aggressive," and "hostile," focus upon emotional qualities, and emotions often are central to explanations of behaviour (Oatley & Duncan, 1992; Plutchik, 1980; Smith & Lazarus, 1990). Moreover, people apparently are aware of these and other aspects of emotional experience and communicate about them regularly. As noted by Shaver, Wu, & Schwartz (1992):

> Ordinary people know a great deal about emotions. They can reliably name basic emotions displayed in photographs, agree on which emotion generally follows from a particular set of abstract antecedents, and concur on the dimensional placement of various emotion concepts. In addition, both children and adults can report and agree on typical antecedents of several common emotions . . . and talk about methods for controlling the expression of negative emotions . . . . Everyday conversation, beginning in the third year of life . . . is full of emotion language. (p. 185)

Further evidence of the nature of emotion as an abiding concern in everyday life comes from the focus on emotions in popular culture and self-help psychology. For many

years popular wisdom has emphasized the importance of recognizing and coping with one's own emotions (Sommers, 1984). Any survey of a major bookstore reveals large spaces devoted to volumes which claim to be able to help people fall in love, fall out of love, become more sensitive, less anxious, less sad, or less angry, or more generally cope with a staggering array of possible difficulties rooted in emotional experience. One noteworthy book, entitled "Emotional Intelligence," popularized a wide-spread focus on the topic of emotion with its claim that being able to manage one's own and other's emotions is an ability which is as important as other facets of intellectual functioning (Goleman, 1992).

The significance of emotion in life needs no further elaboration, and this helps to explain why modern researchers have been pursuing the scientific study of this topic since Darwin first included emotions as part of evolutionary theory. Although some theorists have argued that, historically, emotion has been neglected as a central and organizing construct in psychology (e.g., Ellsworth, 1991; Smith & Lazarus, 1990; Sommers, 1981), an ever-growing body of theory and research is providing the framework for a comprehensive, cohesive, and multidisciplinary view of emotion. Recent research, for example, has been directed at examining epidemiological factors such as the frequency and intensity with which various emotions are experienced and the extent to which they are expressed, as well as other elements of subjective experience such as the causes, accompaniments, and effects of emotions (e.g., Fridja, Mesquita, Sonnemans, & Van Goozen, 1991; Oatley & Duncan, 1992, 1994; Scherer & Wallbott, 1994). As well, the overall focus on cognition in psychology has been used more recently to illuminate rather than obscure issues pertaining to emotion. Appraisal theorists, for example, are

concerned with the effects of cognitive evaluations of emotional stimuli, and a large body of evidence has been accumulated in an effort to delineate the role of cognitive appraisals in experienced emotion (e.g., Ellsworth & Smith, 1988a, 1988b; Roseman, 1991; Scherer, 1984; Weiner, 1985).

Also clearly implicated as part of emotional experience is the manner in which people evaluate their own emotions, compare their own emotions to those of others, and perceive those of others. Herein lie some important aspects of emotional experience which are distinctly social psychological in nature, and which are the focus of the present analysis. Russell (1980) similarly pointed to the importance of the social aspects of emotion when he noted that "in their daily interactions with others, most people interpret the moods of others, anticipate each other's emotional response, and seek to modify these emotional responses. In doing so, laymen must rely on their knowledge about emotion" (p. 1162). Researchers who adopt a functionalist perspective toward emotion long have maintained that emotions are important because they are used to cope more effectively with the environment (e.g., Ellsworth & Smith, 1988a, 1988b; Lazarus, Kanner, & Folkman, 1980; Plutchik, 1980). That is, emotions are thought to act as some type of mediator between environmental stimuli and communication or coping strategies. As such, they are important both to the individual who is experiencing the emotion, as well as to those who are observing it. In addition, it has been suggested that both what people feel and what they display is subject to certain implicit norms or "rules" that are inherent within a given culture (Ekman, 1984; Hochschild, 1979; 1990). Thus, although emotions, and especially strong or intense ones, may be considered to be deeply personal, internal experiences, there is little question that they affect and are affected by the social context

in which they occur.

Also with regard to the social nature of emotion, it would appear that particular characteristics of the experiencer have an important impact on the manner in which emotion is experienced and perceived. One characteristic that has been shown to be especially relevant to the experience of emotion is gender,[1] and many studies have documented gender differences in the self-reported frequency and intensity of emotional experiences (e.g., Grossman & Wood, 1993; Johnson & Schulman, 1988). Moreover, it has been argued that the idea that women are emotional whereas men are rational is one of the strongest aspects of gender stereotypes; so strong, in fact, that it is often taken as a cultural fact (Fischer, 1993). This stereotype implies the existence of a substantive

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[1] A brief explanation of terminology is in order owing in large part to the lively and sometimes confusing debate surrounding the terms sex and gender. The use of these terms frequently follows the distinction initially proposed by Unger (1979) and accepted widely by many prominent theorists and researchers (e.g., Ashmore, 1990; Basow, 1992; Canary & Emmers-Sommer, 1997; Shields, 1990, 1991). Specifically, "[t]he emerging consensus, at least among psychologists who study sex and gender, is that sex is best used to refer to biologically determined aspects of men's and women's behavior, whereas gender should denote male-female differences that are shaped by sociocultural factors" (Ashmore & Sewell, 1998, p. 378). One major reason for the development of this specified terminology is that the terms sex and gender can connote causal assumptions. As a result, undefined use of the term "sex," as in "sex differences," for example, may lead to the inference that all such differences are rooted in biology and therefore not influenced by social conditions (Ashmore & Sewell, 1998). Of course, often it is very difficult, if not impossible, to distinguish between genetic and environmental influences, and almost all who study sex and gender acknowledge not only that both forces operate, but that they interact. Some researchers even have chosen to use the combined term "sex/gender" (e.g., Ashmore & Sewell, 1998) or "sex and gender" (e.g., Canary & Emmers-Sommer, 1997) to capture the interdependence of the complex set of biological variables and the highly significant social category system. However, in order to avoid this type of cumbersome terminology and to simplify matters for the purposes of this report, the term gender will be used throughout to refer both to the biological and the social categories of males and females. Note, however, that no assumptions about causality are being made, and the present research is not designed to disentangle any possible biological or social influences on experiences or perceptions of emotion.

difference in the emotions of men and women, such that women are thought to experience more emotion, more often, and to show their emotions to a greater extent than men. Also implied in this stereotype is the idea that women have a lower capacity for self-control over their own emotional experiences and expressions (Shields, 1987). Given these strong and pervasive stereotypes, combined with the evidence which suggests that women and men differ at least somewhat in their real emotions, it becomes apparent that gender is another factor which needs to be addressed within any social approach to the study of emotion.

Although a diverse body of research and theory has drawn attention to the nature of emotion as both socially experienced by the individual and socially perceived by others (e.g., Goffman, 1959; Grossman & Wood, 1993; Hochschild, 1979, 1990; Johnson, 1987; Karasawa, 1995), research in this area has not fully addressed some important issues relevant to a social psychological approach to emotions. Given this state of affairs, the overall purpose of the present investigation is to fill in some of the gaps in this area. In pursuit of this goal, this research focuses on some of the most salient social psychological aspects of emotion, including attributions for emotion, social comparison of emotion, and the influence of gender on perceptions of own and others' emotions. The specific variables of interest include perceptions of intensity, appropriateness, locus of causality, controllability, and consensus for own and others' emotions. The specific meaning of these terms and their relation to one another will be described in the forthcoming theoretical review and analysis.

In general, this research seeks to address three broad questions. First, how do individuals perceive their own emotions in terms of intensity, appropriateness, causality,

controllability, and comparison with others? Second, how do observers of emotion perceive these same features of emotional experience? Third, to what extent does gender affect these perceptions and explanations of emotion? Much more generally, this research may be viewed as an investigation into implicit theories or the everyday understanding of emotion. As noted by Russell (1980):

> People might be said to have an implicit theory of emotions, suggesting an analogy to implicit personality theory or to a scientific theory. Indeed, the layman's cognitive representation of emotion is presumably implicit in the sense that few if any could explicitly state their complete conceptual framework; it must be inferred from judgments made about emotion. (p. 1162)

Why is it important to study the everyday understanding of emotion? For one thing, implicit theories of emotion very often influence important life decisions. That is, individuals' assessments of their own and others' emotions affect all kinds of diverse judgments, both major and minor, such as what political candidate to vote for, whom one chooses for friends, whom one chooses to date and/or marry, as well as what type of products to purchase (Smith 1995). In addition, perceptions of emotion are implicated in social judgments and can affect both trait attributions and behaviour (Helgeson & Gollub, 1991; Karasawa, 1995; Lui, Karasawa, & Weiner, 1992). Further, and more basically, it has been argued that the understanding of emotional states is one important aspect of human cognitive processing which deserves attention in its own right (Wallbott, 1990). It within the context of these observations that the following program of research is presented.

General Overview

As a basis for the current program of research, relevant theory and research from the areas of emotion and social psychology are reviewed, and the ideas most relevant to a social psychological approach to emotions are examined. The theoretical review has three broad components. First, the nature of emotions is discussed briefly as it has been approached in the field of the psychology of emotions. This provides a general context for the current research as well as the theoretical rationale for a large portion of the methodology that was employed therein. Next, various aspects of the social psychological phenomena of attributions and social comparison are described both generally and more specifically as they apply to the study of emotion. Finally, a general discussion of the processes of categorization and stereotyping foreshadows a description of gender stereotypes and actual gender differences in emotion, as well as their implications for perceptions of women's and men's emotions. Synthesis of ideas and hypotheses for the current research are derived from these theoretical foundations.

Following the theoretical review, three studies are described. The first focussed on individuals' perceptions of their own emotions, and involved asking participants to provide retrospective reports of recent emotional experiences and answer questions about those experiences. Questionnaire items pertained to perceptions about intensity, appropriateness, causality, controllability, and consensus for actual experienced emotions. The reported emotions were examined in terms of these dimensions, and the ratings of male and female participants were compared. The second study in this series was designed to assess observers' perceptions of the emotional situations described in the first study, and allowed for an "objective" comparison of the emotional "triggers"

described by males and females in Study 1. The purpose of this study was to determine whether male and female participants in Study 1 reported emotional situations that differed in objective magnitude.

The final study in this series built directly on the first two, and was designed to address more directly the influence of gender stereotypes on perceptions of emotions. In this study, male and female targets were described in various emotional situations, and participants were asked to make the same kinds of ratings about intensity, appropriateness, causality, controllability, and consensus from the perspective of an observer. The specific nature of these studies is detailed following a comprehensive review of relevant theory and research.

Review of the Literature and Theoretical Foundations

The Nature of Emotion

Definition of Emotion

Although almost everyone knows that emotion exists, most people have difficulty defining the term (Fehr & Russell, 1984). The obviously subjective nature of emotion has posed similar definitional problems for psychologists and others who pursue the scientific study of emotion. Despite this definitional difficulty, however, social scientists basically agree that emotion is a multidimensional process which can be characterized according to at least three components. These include: (a) physiological arousal or change in bodily sensations; (b) conscious, subjective experience which includes all thoughts related to the emotion; and (c) the free or inhibited display of expressive gestures and behaviour (Frijda, 1993; Hochschild, 1990; Izard, 1991; Izard & Buechler, 1980; Kring & Gordon, 1998; Lazarus et al., 1980; Scherer & Wallbott, 1994; Scott, 1980). This final component

more specifically has been termed "action readiness" (Fridja, 1993; Fridja, Markham, Sato, & Wiers, 1995; Fridja & Mesquita, 1998) or "action impulses" (Lazarus et al., 1980) in order to reflect the fact that emotional experience typically is associated with some type of impetus to gesture or action, the result of which may or may not be expressed outwardly.

Although other components of emotional experience have been postulated and more elaborate schemes proposed (e.g., Fridja et al., 1995; Fridja & Mesquita, 1998), the three-component conceptualization focussing on bodily changes, subjective feelings, and motor expression is relevant in the present context because it draws attention to a distinction that is crucial to consider in the study of perceptions of emotion. Whereas the first and second components in this scheme refer to the *feeling* or *experiential* aspect of emotion, the final component deals specifically with the *display* or *expression* of emotion in the form of controlled and uncontrolled gestures and planned and unplanned behaviour. This distinction between the cognitive/experiential and gestural/behavioural components of emotion is important because, given the differing influences and constraints on internal feelings versus external behaviour, it seems reasonable to speculate that perceptions and explanations of emotional experience may differ from those of emotional expression.

To illustrate the need for a distinction between experience and expression of emotion within a social psychological approach, consider, for example, the emotion of anger. Observers may understand and deem appropriate a person's feeling of anger given some frustrating event; however, these same observers likely would neither understand nor approve of the expression of this anger at an inappropriate time or place, or at a level

that results in harm to persons or property. Thus, as long recognized by social theorists (e.g., Goffman, 1959), a person's level of emotional expression often *does not* and, it could be argued, often *should not* match the level of emotional experience. Indeed, it has been proposed that there are informal "display rules" within cultures that guide and inform experiencers of emotion as to when and which aspects of their emotional experience they should and should not show outwardly (Ekman, 1984). Furthermore, as will be detailed shortly, gender stereotypes of emotion pertain both to the experiential and expressive domains, thus adding to the importance of this distinction.

In addition to the aforementioned components of emotion, there is one further aspect which has particular relevance to the study of perceptions of emotion. This component is referred to as "significance" (Fridja, 1993) or "meta-mood experience" (Mayer & Gaschke, 1988), and is meant to capture the fact that subjective feelings can be experienced both on a direct and a reflective level. According to this argument, the evaluation of one's own emotions in terms of such things as their desirability, appropriateness, and controllability contributes to the overall emotional experience (Frijda et al., 1995; Fridja & Mesquita, 1998). Furthermore, such judgments are thought to function in the monitoring, evaluation, and regulation of subjective experience (Mayer & Gaschke, 1988).

The notion of significance is important in the present context because it is exactly these kinds of judgments about appropriateness and controllability that are of interest. That is, the focus here is on the extent to which individuals perceive their own emotions as appropriate as compared to inappropriate, and controllable as compared to uncontrollable. It also seems reasonable to assume that observers evaluate the emotions

of others in terms of these features and that these kinds of judgments have an effect on interaction. In fact, Mayer and Gaschke (1988) have argued that these types of meta-perceptions of subjective experience may be critical to interpersonal relations because of the possibility of discrepancies between own and others' evaluations. These observations suggest that the comparison of experiencer versus observer (or self versus other) perspectives is important to take into consideration, and this serves to justify part of the current focus which is on social comparison and emotion.

One further point to be addressed in defining emotion has to do with distinguishing emotion from other affective states such as moods. In describing the nature of emotion, Averill (1982) and Fridja (1993) point out that emotions are defined primarily by their orientation toward a particular object. According to Frijda (1993):

> Emotions, by almost general consent, have an object. They are "about" something. One is happy about something, angry at someone, afraid of something. Emotions, in other words, are "intentional" phenomena; they involve a subject-object relationship. This applies to subjective experience as well as to behavior. Emotional behavior is directed toward or away from, or at least oriented upon a particular thing. (p. 381)

Furthermore, emotions lack the diffuseness or globality that tends to characterize other affective states such as moods. Delineating this distinction between emotions and moods is important within the context of the present analysis because the emphasis here is on emotions rather than moods. Accordingly, the literature review and theoretical arguments to follow are confined to research and theory pertaining to emotion. Further, the importance and relevance of the idea that emotion occurs in response to some object or

event becomes especially apparent during the forthcoming discussion of attribution for emotion.

Characteristics of Emotion

The description of emotion provided thus far has suggested that emotions can be viewed in terms of both experience and expression, and that they may be reflected upon and evaluated both during and after their occurrence. There are, in addition, other features of emotion which commonly are addressed in empirical studies and are particularly relevant in the present context. Specifically, emotions have been said to vary with regard to their intensity, their polarity or valence, as well as their similarity to one another (Plutchik, 1984; Russell, 1980). That is, each discrete emotional experience differs with respect to the intensity with which it is experienced, the extent to which it is positive/pleasant or negative/unpleasant, as well as the extent to which it resembles other emotions. Sadness, for example, is a negative or unpleasant emotion which may be experienced with low intensity as in mild unhappiness, or with high intensity as in grief or deep depression. Sadness may bear some resemblance to other unpleasant emotions such as anger or shame, and is considered to be the opposite of joy or happiness (Plutchik, 1980). Further, returning to the experience versus expression distinction, experienced sadness may or may not be displayed outwardly in the form of gestures or behaviours such as frowning or crying.

Classification of Emotions

Up to this point, emotion has been used as an umbrella term encompassing all of the subjective experience that may fit into this category. Obviously, however, there are many specific kinds of emotion that are associated with this more general category. In a

study designed to examine the everyday understanding of emotions from a prototype perspective, Fehr and Russell (1984) asked participants to list the items that came to mind most readily when they thought of the term "emotion." Although this free-listing procedure yielded a diverse array of subjective states that participants regarded as emotion, it also revealed that there was considerable agreement as to which emotions were the best exemplars of this category. Specifically, happiness, anger, sadness, love, fear, hate, joy, excitement, and anxiety were mentioned by a substantial number of participants as being members of the category of emotion.

Whereas the study described above was based on everyday thinking about the emotions, some investigators have attempted to delineate what may be considered to be *primary* or *fundamental* emotions on the basis of complex theoretical approaches which for the most part are rooted in evolutionary theory (e.g., Ekman & Friesen, 1975; Izard, 1991; Izard & Buechler, 1980; Plutchik, 1980, 1989; Tomkins, 1980). The argument underlying this approach is that emotions differ from one another in the extent to which they are basic to human experience, such that some emotions really are blends or combinations of more basic ones. Plutchik (1980), for example, has proposed anger, fear, disgust, happiness, sadness, and surprise as candidates for primary emotions. Overall, it would appear that anger, fear, happiness, and sadness are common to most of these classification systems. Some theorists argue, however, that it is neither possible nor necessary to delineate such classifications of emotion (e.g., Lazarus et al., 1980). For present purposes, suffice it to say that such perspectives continue to influence scientific inquiry into emotions, and that some specific emotions appear to be considered more basic or prototypical than others by both theorists and everyday observers of emotion

alike.

The Everyday Experience of Emotion

A growing body of research has been directed toward obtaining information about the extent to which various emotional states are experienced and expressed, as well as the perceived causes and effects of such experiences. Research examining the events that lead to emotions has revealed that the most common antecedents include events in which other people and their relationships to the experiencer played a role in causing the emotion (Averill, 1982; Oatley & Duncan, 1994; Scherer, Summerfield, & Wallbott, 1983). Research on the frequency with which various feelings are experienced has produced somewhat conflicting results, with some studies finding that positive emotions are reported to occur more frequently than negative emotions (e.g., Diener, Larsen, Levine, & Emmons, 1985; Oatley, 1998; Sommers, 1984), and others suggesting that negative emotions occur with greater frequency (e.g., Oatley & Duncan, 1994; Scherer & Wallbott, 1994). Similar discrepant findings have been reported with regard to the reported intensity of experienced positive and negative emotions (Oatley & Duncan, 1994; Scherer et al., 1983; Sommers, 1984).

Oatley (1998) has addressed these discrepancies by suggesting that mild, positive emotions, which actually could occur with greater frequency, may be overlooked or forgotten in reports of emotion, whereas intense emotions are of more concern and consequently remain more available to experiencers. Sommers (1984) has provided additional evidence which suggests that, at least among college students, mild positive emotions are viewed as more typical and more acceptable than any kind of negative emotions, both for self and others. This research also showed that individuals tend to

prefer others who are described as experiencing predominantly positive affective experiences, while viewing much more unfavourably those who are described as experiencing mainly negative affect. Interestingly, females who were described as having a negative emotional character were viewed even more negatively than similarly-described males. These findings are of particular interest because they relate both to perceptions of own and others' emotions, and they specifically focus on the influence of the social category of gender. Furthermore, this research is illustrative of the approach and issues that are of present concern.

Summary and Relation to the Present Analysis

This very brief review of theory and research on emotion has illuminated some fundamental insights which are of relevance to the present analysis. Of particular importance are the ideas that emotions have both experiential and expressive components, and that they are subject to reflective, evaluative judgments in terms of their significance. In addition, emotions vary in the intensity with which they are experienced as well as in their valence, or the extent to which they are experienced as pleasant or unpleasant. Commonly researched emotions include happiness, anger, fear, and sadness, and these usually are considered to be basic or prototypical emotions. Research on the everyday experience of emotions suggests that people may experience mild, positive emotions most frequently, even though these may not be the ones that are most salient or memorable to them.

Having now established this basic backdrop of theory and research on emotions, a consideration of the social psychological principles relevant to the study of emotions can be pursued. For example, research on attributions and emotion has suggested that the

dimensions inherent in causal reasoning may play a role in perceptions and explanations of experienced and observed emotions. A general introduction to attribution theory will precede a specific discussion of the relevance of attributions to perceptions of emotions.

The Attribution Process

Everyday Explanations of Causality

A great deal of theory and research in social psychology has been directed toward examining the processes by which people make sense of the events they encounter in the course of everyday interaction. Specifically, attribution theories attempt to describe the kinds of explanations that people make about events and behaviour and how they go about deriving their explanations. Modern attribution approaches grew largely out of the work of Fritz Heider who championed the study of "common-sense psychology." In his seminal work entitled "The Psychology of Interpersonal Relations," Heider (1958) argued that, in order to understand scientifically the nature of social phenomena, it is essential to understand people's common-sense explanations of these phenomena. Underlying this approach was Heider's belief that individuals seek understanding of themselves and others and often ask *why* events occurred. He also assumed that people for the most part are rational, guided in their reasoning by social information and directed in their actions by naïve psychological beliefs.

In general, Heider (1958) conceived of social perceivers as "naïve psychologists" who, like scientists, constantly attempt to make sense of their world by trying to discover the cause-and-effect relations that occur around them. These everyday attempts to make sense of cause-and-effect relations result in the ascription, or *attribution*, of observed events to particular causes. Of course, any single event can have a multitude of possible

causes, resulting in innumerable potential explanations for the domain of social behaviour. In order to simplify the assignment of perceived causes, Heider searched for an underlying structure that could be applied to naïve explanation. His reasoning led to the suggestion that, of all the possible explanations for social behaviour, attributions generally can be classified as reflecting one of two types of causes: (a) factors within the person, or (b) factors outside the person (in the environment). In the case of an individual who has acted aggressively, for example, the cause of the aggressive act may be located within the person, such as when an aggressive disposition is cited as a casual agent, or the cause may be located outside the person, such as when it is perceived that the actor was provoked by someone or something in the environment. Heider's suggestion that causes could be construed as internal or external to the person was the first delineation of the systematic structure presumed to underlie causal ascriptions.

In another important and enduring insight, Heider (1958) suggested that because of the inevitable link between actors and their acts, and because the behavioural act rather than the situation usually is the focus of attention, people tend to underestimate the impact of situational factors and overestimate the role of dispositional factors in controlling the behaviour of others. This general tendency to make internal rather than external attributions when considering the behaviour of others has been demonstrated in numerous experimental studies (e.g., Jones, 1979; Jones & Harris, 1967; Ross, Amabile, & Steinmetz, 1977), and has been labelled the "fundamental attribution error" due to its pervasiveness (Ross, 1977).

Another very important aspect of Heider's (1958) argument was that, regardless of whether they are true or untrue, common-sense attributions guide behaviour because

they allow for description and prediction of social events. From this perspective, then, the accuracy of attributions is not the main issue of concern because causal ascriptions have important implications for feelings, beliefs, and behaviours regardless of their actual truth value. Thus, the task of attribution theory is not to reveal the *true* causes of behaviour, but rather to provide insight into people's *perceptions* of the causes of behaviour.

Attribution Theories

Heider's (1958) initial statement of attribution theory spawned a host of important elaborations on the manner in which people go about explaining the behaviour of others. These include Jones & Davis' (1965) correspondent inference theory which details the circumstances under which people are likely to infer that behaviour corresponds to an enduring characteristic of the actor, as well as Kelley's (1967, 1973) covariation theory which suggests that people use information about consensus, distinctiveness, and consistency in deciding between internal versus external attributions for behaviour.

Another important and widely-accepted attribution theory is the motivational sequence and three-dimensional taxonomy of attributions proposed by Bernard Weiner (1980, 1985, 1986). Building on Heider's (1958) distinction between internal and external attributions for behaviour, Weiner has argued that at least two other dimensions of causality are required because, among the possible causes of behaviour, some fluctuate whereas others remain relatively constant, and some are seen as controllable whereas others are viewed as uncontrollable. Thus, causes can be construed as varying along the dimensions of locus, stability, and controllability, and causal reasoning is assumed to be part of a motivational sequence which gives rise to specific affective reactions and behaviours.

Attributions for Emotion

Explaining Emotion

As we have seen, attribution theories attempt to explicate the processes that guide everyday cause-and-effect explanations. At this point, however, it is appropriate to question exactly what it is that naïve psychologists are explaining. Most attribution theories focus on the explanation of social behaviour and/or "outcomes" in various contexts. But what about the subjective experience of emotion, which may or may not have apparent behavioural manifestations? Emotions are implicated in Weiner's (1986, 1995) model as a *consequence* of the attribution process; that is, in accord with appraisal theories of emotion, particular dimensions of causality have been shown to give rise to certain differentiated self- and other-directed affective reactions. But one has to wonder whether the resultant emotions themselves are explained by experiencers and observers in a manner analogous to other social behaviours. Both theory and research suggest that emotions can and often do take the place of "stimuli" to be explained.

A naturalistic investigation of attributions by Lewis (1995), suggests that people do, in fact, explain emotions in the course of their everyday activities. In a series of studies, Lewis asked participants to stop at random times during the day and record what they were doing and why they were doing it. If another person was in the immediate area, similar ratings were made for that person. After coding responses according to predetermined stimulus and explanation categories, results revealed that, when asked to describe what they were doing or what they were observing, participants frequently responded with descriptions of emotions and thoughts as well as actions. Thus, it would appear that emotions are important social phenomena to be explained in everyday life.

Moreover, research on perceptions and explanations of emotion has been conducted which pertains specifically to the dimensions of locus of causality and controllability from attribution theory. These will be reviewed in turn.

Locus of Causality and Emotion

Like many other topics which have been subjected to attributional analysis, explanations for emotion can be traced to the theorizing of Heider (1958). Within the context of a discussion of pleasure and other feeling states, Heider (1958) argued that "[t]he person tends to attribute his own reactions to the object world, and those of another, when they differ from his own, to personal characteristics in *o* [other]" (p.157). Implicated in this argument is the idea that emotions usually are attributed to an object which gives rise to them; that is, they are attributed externally, both for self and others. However, an element of social comparison is added, in that the reactions of others are compared to one's own with an expectation of similarity. If another's reaction is thought to differ from one's own, then it is likely that the reaction of the other will be perceived to be a result of factors internal to the person instead of the more usual external ones.

Experimental research relating to locus of causality and emotion has provided support for Heider's (1958) speculations regarding attributions for emotion. That is, when individuals are presented with an emotion term or an emotionally-related behaviour as a stimulus and asked to judge the likely cause, external attributions tend to be favoured (Hansen & O'Leary, 1983; Lewis, 1995; McArthur, 1972; Zuckerman & Feldman, 1984). In the study by Lewis (1995), for example, emotions felt or observed were explained mainly in terms of the situation rather than in terms of the person. This can be contrasted with perceptions of actions which are more likely to be seen as voluntary and attributed

internally (McArthur, 1972; Zuckerman & Feldman, 1984). In general, it has been suggested that normally people understand emotions as being aroused in response to an eliciting stimulus or trigger in the environment; hence, the idea of an emotional "reaction"—one is reacting in response to some event (Ellsworth, 1991). In addition, Averill (1982) has noted that emotions normally are interpreted as passions rather than actions; that is, emotion is seen as something that happens to people and not something that they do deliberately.

Interestingly, this link between naïve perceptions of emotion and ascriptions to external causes is in accord with definitions incorporated in current conceptualizations of emotion theory. Recall that emotions are defined primarily by their orientation toward a particular object (Averill, 1982; Fridja, 1993). That is, emotions are defined in theory as having an object and as being about something. This view also is in accord with recently proposed prototypical stages or elements of emotional experience, with the first stage or element described as the occurrence of some type of eliciting event (e.g., Ekman, 1984; Frijda et al., 1995; Fridja & Mesquita, 1998).

It would appear, then, that in both scientific and implicit theories emotions typically are seen as arising in response to something external to the experiencer. However, despite all of the evidence pointing to external attributions for emotion, some research suggests that perceptions of locus of causality for emotion may not be quite so straight-forward. In a recent investigation by Karasawa (1995), for example, the impact of valence of the stimulus emotion on attributions was taken into consideration. In one of a series of experiments, participants were asked to rate the impact of both internal and external causality for a number of hypothetical positive and negative emotions described

as being experienced by self or by another person. Specifically, for example, participants were asked to recall or imagine themselves or someone else feeling sad, and then rate the extent to which it was likely that something sad had happened as well as the extent to which the person experiencing the emotion was a sad person.

In Karasawa's (1995) study, the results for positive emotions confirmed earlier research which suggested that external attributions tend to be favoured when explaining emotions. That is, the situation was judged as causally more important in eliciting the emotion than was disposition, both for self and others. The findings for negative emotions, however, revealed a different pattern of responses. Here a difference between self and other as target was found. Specifically, negative emotions were attributed to the situation, or something that happened, when participants rated their own emotions. When evaluating the negative reactions of others, however, there was about equal ascription of causality to the person and to the situation. Thus, there appears to be a tendency to perceive the person as more implicated in terms of causation when evaluating the negative emotions of another.

Lui et al. (1992) provided additional evidence for the dispositional bias in making inferences about the causes of others' negative emotions. In this research, participants were provided with a situational cause for certain emotional reactions in hypothetical others, and then were asked to indicate the extent to which additional factors contributed to the reaction, including disposition of the actor (internal, stable), mood of the actor (internal, unstable), and something else about the situation (external). Results revealed that, for positive emotions, all three additional causes were rated as somewhat high and nearly equal, suggesting that multiple causes are perceived as the determinants of positive

emotions. For negative emotions, however, perceptions of dispositional causality were elevated over mood and situation judgments, suggesting that the person is particularly implicated as a causal factor for the experience of negative emotions. Overall, attributions to internal factors were relatively high, suggesting that even when an external factor is cited as the main cause of an emotion, some causal attributions to the person still are being made.

Perceptions of Controllability and Emotion

In addition to locus and stability, Weiner (1985, 1986) has argued that the dimension of controllability also is fundamental to the attribution process because all causes may be seen to vary in the extent to which they are subject to volitional control. More specifically, controllability refers to the possibility of volitional influence over the onset *or* the offset of the cause of an event (Brickman et al., 1982; Weiner & Graham, 1989). With regard to emotions, onset control has been implicated in appraisal theories of emotion such that differing perceptions of control over the eliciting event appear to contribute to the arousal of different emotions (Ellsworth & Smith, 1988a, 1988b; Weiner & Graham, 1989).

More important for the present analysis, however, and less well-understood, is the extent to which individuals perceive themselves and are perceived by others as having control over their own emotional experiences and expressions once an emotion already has been aroused. This is more closely related to the notion of offset controllability. To illustrate, consider the emotion of sadness. If this negative state is believed to be due to an uncontrollable negative event, then the experiencer likely will not feel or be held responsible for the onset of the problem. However, the experiencer may be perceived as

having some control over the actual feeling state and as being responsible for doing something about it, so responsibility for coping nonetheless may be felt or assigned (Brickman et al., 1982). When considering emotions, then, it may be that even though emotional reactions generally are perceived as being elicited by the situation and therefore as uncontrollable, the target still may be held responsible for coping with or managing the elicited emotion.

Johnson and colleagues (Johnson, 1987; Johnson & Schulman, 1988; Johnson, Struthers, & Bradlee, 1988) have attempted to specify the implications of these types of attributions for perceptions of emotional experience as compared to emotional expression. These researchers reasoned that because emotional experience usually is perceived as arising in response to some external eliciting stimulus, it consequently is seen as mostly involuntary or uncontrollable. Emotional expression in the form of gestures or behaviour, on the other hand, is more likely to be attributed internally to the actor and therefore perceived as more voluntary or controllable. Thus, observers and experiencers alike should perceive emotional expression or display as more controllable than emotional experience. Johnson et al. (1988) provided evidence that individuals do indeed believe that the display of an emotion is easier to control than its subjective experience.

Again, these findings from social psychological research are in accord with recent conceptualizations in emotion theory. Specifically, with regard to the action readiness or impetus to action that is associated with the process of emotion, Fridja and colleagues (Fridja, 1993; Fridja et al., 1991; Fridja & Mesquita, 1998) have described an interesting feature which is proposed to define this tendency toward action when emotion occurs.

These researchers argue that action readiness is characterized by what is referred to as "control precedence," which means that emotions are processes that tend to control thoughts and behaviour. Therefore, thoughts and actions stimulated by an emotion tend to override or interfere with other thoughts and actions that might be going on at the same time, especially when the emotion is experienced intensely. So, for example, when one is experiencing an emotion such as anger, the notion of control precedence suggests that the anger would be the main focus of thoughts and actions during the time that it is experienced. This may involve being preoccupied with the issue that is perceived to have caused the anger, as well as having most attention focussed upon emotion-relevant stimuli. Fridja and colleagues consider this aspect of control precedence to be so important that they have suggested that it is the most distinctive feature of emotions generally.

Emotion researchers who have included measures of emotional control in their research generally have conceptualized control as the regulation or management of emotional expression rather than experience. Paralleling the ideas from implicit theories, the underlying assumption seems to be that experience is less likely to be subject to any kind of control or management, even though "feeling rules" have, in fact, been studied with regard their to influence on attempts to manage emotional experience (Hochschild, 1979; 1990). Most often in questionnaires individuals have been asked about their ability to control or hide the extent to which their emotions were displayed to others. In studies of this nature which have employed remembered emotions as stimuli, participants do report attempting to control or hide at least some of their emotions (Scherer et al., 1983; Scherer & Tannenbaum, 1986; Scherer & Wallbott, 1994; Wallbott & Scherer, 1986).

Among the specific emotions investigated, happiness is reported as the least controlled of all emotions, presumably because there are fewer display rules guiding the outward show of this emotion. Negative emotions are reported as being controlled to a greater extent than positive emotions, and fear and sadness are reported as being regulated more than anger, which is considered somewhat of a surprising result given the common perceptions of anger as negative and generally unacceptable to display (Scherer et al., 1983; Scherer & Tannenbaum, 1986; Scherer & Wallbott, 1994; Wallbott & Scherer, 1986).

Note that the results described above are specific to the construct of emotional control operationalized as attempts to reduce or hide the show of emotion. In the present analysis, however, control is conceptualized more generally as a perceived feeling of potential influence over experience and expression of emotion. Thus, control need not be exercised, and need not mean management in the form of hiding emotions from others. Instead, control in this context is meant to capture the extent to which a person subjectively feels in control of his or her emotions, as opposed to feeling controlled by them or overwhelmed by them.

Summary and Implications of Attribution Theory and Research

The research described in the foregoing review has illuminated many of the issues relevant to perceptions and explanations of emotion. Specifically, it appears that, although both person and situation are implicated in judgments about causality for emotions, external causes overall are more prevalent, except when one is considering the negative emotions of another. In these cases, internal causes are more prevalent, suggesting that something about the person, such as a characteristic manner of

responding emotionally, is responsible for the observed affect. According to Karasawa (1995), "dispositional attributions suggest that the emotional reactions are inappropriate for what has happened, or at least that they are an overreaction, because dispositional attributions imply that the situation is not strong enough to account for the emotion" (p. 462). Thus, it would appear that the appropriateness of the emotional response, or the perceived match between the emotional stimulus and the emotional response, may be a factor that is associated with attributions. This notion has yet to be addressed in research on emotion.

With regard to controllability, it appears that whereas emotional experience is perceived most generally as uncontrollable by the experiencer, emotional expression is thought to be subject to greater volitional control. These results seem to be consistent with some common thoughts about emotion. As noted above, emotions usually are understood as reactions to external events and therefore as mostly uncontrollable. In contrast to the idea of unbridled emotions, however, is the idea that emotions can and should be under the control of the experiencer. Phrases such as "get a hold of yourself" and "don't be so emotional" imply that at least some aspects of emotion should come under volitional control. Moreover, this perception of control over emotional expression is an underlying assumption of the display rules which dictate what is acceptable in terms of showing emotion. Questions remain unanswered, however, about the extent to which real experienced emotions are perceived as controllable, as well as what factors may affect perceptions of controllability.

Attribution research relating to emotions thus provides some important insights into the nature of implicit theories of emotion, as well as some interesting avenues for

further research. In addition, attribution principles also have been implicated in other processes which have been shown to be relevant to the social psychological study of emotions. Specifically, the manner in which these attributions affect comparisons to others has been addressed within research on social comparison, and this is the next topic to be discussed in the present analysis.

Social Comparison

The Social Comparison Process

Recall that Heider's (1958) initial characterization of attributions for emotion referred to social perceivers comparing the reactions of others to their own. According to this account, perceivers expect similarity in emotional reactions due to the external eliciting stimulus. When another's reaction differs from one's own, however, the reaction then is attributed to something about the other person. This idea is similar to the phenomenon of "false consensus," which suggests that individuals consider their own responses to be more common and less diagnostic of personal characteristics than alternative responses. The notion of false consensus is directly related to social comparison processes.

According to Festinger's (1954) social comparison theory, individuals have a basic drive to evaluate their opinions, traits, and abilities by comparing themselves with similar others. This comparison process often is made difficult, however, because objective information about others is not always readily available. Taking this difficulty into consideration, Festinger argued that when objective means of comparison are lacking, people will use their perceptions of social reality, or their judgments of how people generally think, feel, and view the world, in order to satisfy their needs for social

comparison. Thus, self-evaluations seem to depend most critically upon personal beliefs concerning the extent to which one's opinions, traits, and abilities are shared by others, especially others who are similar or comparable. In the absence of objective evidence, consensus estimates for particular responses are constructed by social perceivers, based on their perceptions of social reality, in order to gauge their standing relative to others.

Although social perceivers can be logical and rational processors of social information, psychologists long have been interested in the various shortcomings that can lead to misperceptions of social reality. In the absence of objective measures, social perceivers must rely largely upon intuition and subjective impressions in their estimates of the characteristics of others. Such estimates, indeed, have been found to be subject to sources of oversight, error, and bias that may seriously affect one's ability to understand others and oneself (Ross, 1977). In fact, Goethals, Messick, and Allison (1991) have argued that people often construct highly biased, self-serving consensus estimates for their opinions, traits, and abilities. For example, several studies have shown that people often exaggerate the extent to which others are similar to themselves (e.g., Goethals, Allison, & Frost, 1979; Ross, Greene, & House, 1977).

False Consensus

Ross et al. (1977) introduced the term "false consensus" to refer to the tendency of social perceivers "to see their own behavioral choices and judgments as relatively common and appropriate to existing circumstances while viewing alternative responses as uncommon, deviant, or inappropriate" (p. 280). The typical procedure in studies of false consensus requires participants to make a choice regarding some behaviour, opinion, or attribute, and also to estimate what percentage of some reference group (such as other

college students or one's peers) would make the same choice and what percentage would choose the alternative. False consensus is said to occur when people who choose a particular response estimate that response to be shared by a larger proportion of some reference group than do people who choose the alternative response (Ross et al., 1977).

Ross et al. (1977) demonstrated the false consensus effect for a wide range of dimensions, including participants' perceived political expectations, personal preferences, traits, personal problems, and hypothetical and authentic behavioural choices. Many other studies have replicated the false consensus effect in domains including: smoking prevalence (Sherman, Presson, Chassin, Corty, & Olshavsky, 1983); health-relevant behaviors (Suls, Wan, & Sanders, 1988); commitment to feminism (Judd & Johnson, 1981); conservationist behaviors in the home (van der Pligt, 1984); and tolerance of stigmatized groups (Sigelman, 1991).

False Uniqueness

Although the false consensus effect has been shown to be common among social perceivers, other research has revealed that there are times when individuals prefer to see themselves as unique rather than similar to others. Specifically, some research suggests that there are situations in which people prefer to view their own behaviour and attributes as distinct rather than common (e.g., Campbell, 1986; Goethals, 1986; Goethals et al., 1991; Marks, 1984). In such cases people do the opposite of what is predicted by the false consensus effect, and underestimate, rather than overestimate, the extent to which others are similar to themselves.

The underestimation of consensus estimates has been labelled the "false uniqueness" effect (Goethals, 1986), and several studies have delineated circumstances in

which a false uniqueness bias is likely to occur. Marks (1984), for example, has shown that people tend to underestimate consensus for their abilities, while showing the usual false consensus effect for matters of opinion. Goethals (1986) reported several studies which indicate that in situations where people behave in a relatively socially desirable manner, they underestimate consensus (or overestimate uniqueness) for their behaviour, but when they behave in a less desirable manner they show the typical false consensus effect. Goethals et al. (1991) proposed more generally that "people will construct small estimates of consensus for all their socially desirable behaviour, including successful performances and moral actions, and that they will construct large estimates of consensus for thoughts, feelings, or behaviours that are of negative or uncertain social value, including opinions, performance failures, and moral lapses" (p. 156). Thus, these authors argue that consensus estimates are constructed in a self-enhancing way so as to allow individuals to perceive themselves as comparing well to others.

Causal reasoning in the form of attributions also has been implicated in explanations of consensus effects (e.g., Gilovich, Jennings, & Jennings, 1983; Zuckerman & Mann, 1979; Zuckerman, Mann, & Bernieri, 1982). This account employs the same basic logic offered by Heider (1958). According to this argument, individuals tend to attribute their own behaviour to external factors, and, accordingly, believe that most others would act the same given the same set of circumstances because it is something about the external situation that is responsible for the behaviour (or opinion, and so forth). When behaviours or other outcomes are attributed to dispositional causes, however, lower consensus occurs because the cause of the outcome appears to be more unique to the individual. Although an examination of many studies of consensus effects

suggests that false consensus and false uniqueness likely have a variety of contributing causes (Marks & Miller, 1987), the line of reasoning described above establishes a direct link between attributions and social comparison processes that is in accord with Heider's speculations concerning emotions. Still to be reviewed, however, are some specific studies addressing social comparison and emotion.

Social Comparison and Emotion

Consensus, Uniqueness, and Emotion

In one study of these social comparison effects, McFarland and Miller (1990) suggested that there is a context in which false consensus and false uniqueness may occur simultaneously. These researchers suggested that when the comparison between self and others involves *internal* traits or states (e.g., emotions) as compared to more *external* ones (e.g., behaviours or opinions), it is possible that people may overestimate the number of others who would basically feel the same way in a particular situation, while at the same time believing that they themselves would experience a more intense reaction. That is, these researchers speculated that individuals routinely may perceive consensus for their feelings but uniqueness with regard to the subjective intensity with which those feelings are experienced.

In a study designed to test this hypothesis, participants were asked to imagine two potentially aversive situations, one with the potential for embarrassment, and the other with the potential for empathy arousal (McFarland & Miller, 1990). Participants then were asked to (a) choose the situation that they would *least* prefer to be involved in, (b) estimate the percentage of other participants who would choose similarly, and (c) predict the degree of discomfort that both they and the average other would experience in that

situation. The rationale behind this method was that participants would choose to avoid the situation with the potential to evoke the strongest reaction in them (embarrassment or empathy).

Results generally supported McFarland & Miller's (1990) hypotheses. That is, participants overestimated the proportion of students who would react in the same general way as they would but reported that their own reactions would be stronger than the reactions of other students. In other words, participants estimated that the experiences of others overall would be similar to their own, but that differences would occur with respect to the subjective intensity of the experience. Thus, it would appear that people may perceive themselves to be "just like other people, only more so," to quote from the title of McFarland & Miller's article. This study is important to the present analysis because of its focus on emotions, and is important within the consensus literature because it extended the study of consensus effects from perceptions of behaviours, traits, and opinions to that of temporary, subjective feeling states.

One reasonable explanation for the observation that people perceive consensus for their emotional reactions stems from the attribution explanation of consensus effects and the more specific finding that emotions typically are attributed externally. However, evidence also exists which suggests that the valence or desirability of the particular response under consideration seems to have an effect on consensus estimates such that low estimates of consensus are associated with positive outcomes whereas greater consensus is associated with neutral or negative ones (Goethals et al., 1991). This issue was not specifically addressed in the study by McFarland and Miller (1990) because both of the response options in their study could be considered desirable or appropriate given

the circumstances. An additional shortcoming of this study was that McFarland and Miller asked participants to respond only to general questions about internal affective experiences, and external expression was not taken into account. However, both the factors of desirability of the response and emotional domain (experience and expression) were taken into consideration in studies of the so-called "secret self."

The Secret Self

In research related to false consensus and uniqueness, Johnson and his colleagues (Johnson, 1987; Johnson et al., 1988; Struthers & Johnson, 1991) have reported a series of studies on social comparison of emotion which specifically focus on the distinction between emotional experience and emotional expression. Johnson (1987) began with the observation that

> [I]t is a pervasive belief in our society that people seldom wear their hearts upon their sleeves. We assume that people generally suppress a full public display of their affect, and that a significant portion of the emotional being of both ourselves and others—a private "secret self"—remains consistently hidden. (p. 564)

In reviewing literature relevant to perceptions of internal thoughts and emotions as compared to external behaviours, Johnson (1987) pointed to research which suggests that individuals perceive their own thoughts and feelings as more diagnostic of their true personalities, whereas they see behaviour as important when judging others (Andersen & Ross, 1984). That is, individuals focus upon internal events and characteristics when thinking about themselves, but focus on external behaviour when considering others. Furthermore, Johnson reasoned that the internal experiences of an individual likely are much more available, or come to mind much more readily, than any assumed experiences

of others. This line of reasoning led to the hypothesis that individuals may believe that they, more than others, experience a greater amount of affect that is not displayed. That is, individuals are more aware of their own undisclosed affect or secret selves, whereas they perceive a greater correspondence between the feelings and actions of others.

An additional corollary to this hypothesis took into consideration something akin to the desirability effect that tends to distinguish between false consensus and false uniqueness. Specifically, Johnson (1987) argued that differing patterns may emerge for socially desirable versus undesirable emotions. Based on the attribution literature, which suggests that people tend to view behaviour as voluntary and emotions as involuntary responses to stimuli, Johnson argued that individuals may be motivated to enhance themselves by underestimating their display of socially undesirable emotions. This self-enhancing tendency should not affect perceptions of experience, however, because experiences are perceived as more involuntary; therefore, it would not be as unfavourable to view oneself as experiencing undesirable emotions as it would be to admit that one expresses them outwardly. Overall, this would result in an even greater perception of secret self for undesirable emotions because more emotion is perceived to be experienced but less displayed as compared to others.

In a study designed to test these hypotheses, Johnson (1987) asked participants to estimate the extent to which they and others of varying degrees of familiarity would both feel and display particular emotions. Participants did this by imagining themselves or others in situations for which the context and the emotion were specified. The emotion situations previously had been rated on social desirability. In accord with the hypotheses, results showed that participants consistently estimated that they would feel emotions,

both desirable and undesirable, more intensely than others would feel them (Johnson, 1987). In terms of expression, however, participants estimated that they would display socially desirable emotions more, and socially undesirable emotions less, than others would. For all emotions investigated, the difference between estimated emotional experience and estimated emotional display was greatest for self, suggesting that individuals view themselves as having greater hidden affect or more of a secret self than others. Additional research replicated this pattern of findings, suggesting that, in general, the effects are quite robust (Johnson et al., 1988; Struthers & Johnson, 1991).

Research on the secret self is important for several reasons. First, the finding that individuals perceive their own emotions to be experienced with more intensity than those of others corroborates the results of McFarland and Miller (1990), and establishes this as an apparently robust effect. Second, the secret self research reveals that the intensity effect holds *both* for desirable and undesirable emotional experiences; that is, individuals tend to view themselves as experiencing both positive and negative emotions to a greater extent than others. This finding is in accord with other research on self-serving biases, such as that of Sande, Goethals, and Radloff (1988) who showed that individuals believe that they are characterized *both* by more positive and more negative traits than others. This is a tendency which perhaps allows people to see themselves as more flexible and adaptable to a variety of situations and circumstances.

The secret self research also extends the consensus model to include perceptions of emotional expression as well as emotional experience, and the finding that individuals perceive themselves as expressing socially desirable emotions more and socially undesirable emotions less than others points to the importance of considering the

desirability or appropriateness of the emotional reaction. The self-enhancement explanation of consensus effects offered by Goethals et al. (1991) may be especially relevant in explaining this effect. Finally, it should be noted that consensus in the present analysis is conceptualized in the same manner as in research on the secret self. That is, consensus is defined to mean the extent to which others are estimated to be similar to the target (either self or another experiencer of emotion) in terms of intensity of emotional experience and emotional expression. Thus, high consensus is indicated by the belief that others would react the same as the target, whereas low consensus (or high uniqueness) is indicated by beliefs that others would feel and/or display more or less of the emotion than the target.

Summary and Implications of Social Comparison Theory and Research

Research on consensus estimates and studies of the secret self have highlighted the role of social comparison processes in implicit theories of emotion. Taken together, this research suggests that individuals believe that emotion typically is experienced with greater intensity than it is displayed, both for self and others. People also believe, however, that they experience their own emotions with greater intensity than do others. Moreover, this greater perceived intensity of experience is related to greater perceived hidden affect for the self, such that individuals believe that, compared to others, less of one's own emotions are expressed outwardly. This effect has been found to be particularly strong for socially undesirable emotions, although only hypothetical or predicted emotions have been studied to date.

Underlying a great deal of this research have been assumptions about causal reasoning, and attributions have been directly implicated in explanations of consensus

effects. Although it makes intuitive sense that higher estimates of consensus would result from external attributions as compared to internal ones, the pervasiveness of the fundamental attribution error, which is the general tendency of observers to attribute the causes of others' behaviour to dispositional factors (Ross, 1977), raises questions about these assumptions. As suggested by the findings of Johnson et al. (1988), however, emotions may be somewhat unique stimuli due to perceptions of them as mostly involuntary or uncontrollable. However, as noted in the previous discussion on perceptions of controllability and emotion, more research is necessary to determine the extent to which the real experienced emotions of self and others are perceived as controllable.

In contrast to the research on attributions and emotion, some social comparison studies have taken gender stereotypes of emotion into account. Specifically, Johnson and Schulman (1988) and Robinson and Johnson (1997) have concerned themselves not only with perceptions of the experience and expression of emotions, but also the influence of target gender on such perceptions. These studies will be reviewed in detail after a more general consideration of the processes of social categorization and stereotyping and a description of the content of gender stereotypes.

Social Categorization and Stereotyping

The Process of Categorization

In order to simplify and systematize the complex array of stimuli that are encountered in the world, human beings have a basic tendency to sort or categorize objects into groups rather than think of all individual objects as unique (Rosch, 1978). This process of grouping objects and events according to identifiable attributes is thought

to occur naturally as individuals strive to cope with the apparently endless series of unique stimulus situations that they encounter. In fact, it has been argued that categorization of objects is one of the most fundamental cognitive functions of living creatures (Mervis & Rosch, 1981).

Research in social psychology has revealed that, parallel to the categorization process which occurs in relation to natural objects and events, social stimuli similarly are sorted based on the numerous readily-available cues which can be used to classify people into categories (Taylor, 1981; Wilder, 1986). In this way, people are classified such that members of particular social categories are perceived to share some common property or properties. This results in the categorization of individuals into groups on the basis of attributes such as gender, race, age, social class, and other common social characteristics.

The Process of Stereotyping

Closely associated with the social categorization process are the beliefs that come to be identified with each social category. These beliefs about the characteristics of members of particular social groups are the essence of stereotypes (Hilton & von Hippel, 1996). Specifically, the term *stereotype* has been defined as "a cognitive structure that contains the perceiver's knowledge, beliefs, and expectancies about some human group" (Hamilton & Trolier, 1986, p. 133). In general, research has demonstrated that stereotypes of social groups are pervasive in existence and extensive in content, and that they provide us with rich and vivid expectations of others (Andersen & Klatzky, 1986). Given the broad-ranging and important information they can provide, stereotypes often are useful because, as cognitive "short-cuts," they allow people to form impressions quickly and rely on prior knowledge to guide new interactions.

This cognitive approach to stereotyping, with its emphasis on the information-processing capacities and preferences of social perceivers has led to conceptualizations of stereotypes which, instead of regarding them as necessarily inaccurate or logically faulty, construe them as the normal and probably inevitable outcome of our inherent tendency to classify objects, including people, into various groupings (e.g., Brehm & Kassin, 1990; Hamilton & Trolier, 1986; McCauley, Stitt, & Segal, 1980; Messick & Mackie, 1989). Thus, many current approaches to stereotypes view them essentially as the outgrowth of normal cognitive processes, while at the same time acknowledging the potential for error or overapplication. Furthermore, stereotypes and other categorical representations are now commonly considered in terms of how and when they are used and the consequences of that utilization, rather than simply in terms of content (Deaux & Kite, 1985, 1993; Taylor, 1981).

Gender Stereotypes

Gender as a Social Category

With regard to social categorization, gender represents one obvious and important dimension along which individuals may be classified, and an abundance of research has documented the stereotypical beliefs associated with the social categories of women and men. In accord with the general definition of stereotypes outlined in a previous section, gender stereotypes are defined to mean the "structured sets of beliefs about the personal attributes of women and of men" (Ashmore & Del Boca, 1979, p. 222). Following is a review of the basic content of gender stereotypes, or the characteristics that are most commonly associated with the social categories of men and women. This summary of research begins with a description of some influential early work in the area followed by

an overview of more recent research which attests the overall prevalence and persistence of gender stereotypes. This general review culminates in the specific examination of gender stereotypes of emotion.

The Content of Gender Stereotypes

Following the early investigations of racial stereotypes (e.g., Katz & Braly 1933), researchers began to explore the nature of beliefs about the social categories of men and women (e.g., Fernberger, 1948; McKee & Sheriffs, 1957; Sheriffs & McKee, 1957). The work that ultimately came to serve as a benchmark for subsequent studies of gender stereotypes was conducted by Paul Rosenkrantz, Inge Broverman, and their colleagues in the late 1960's and early 1970's (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Rosenkrantz, Vogel, Bee, Broverman, & Broverman, 1968). The purpose of this research was to identify the characteristics that were believed to describe typical women and men in American society. In one of their highly-cited studies, Rosenkrantz et al. (1968) asked college students to rate the typical adult male and the typical adult female on a series of over 100 bipolar personality descriptors which had been generated by another student sample.

Overall, Rosenkrantz et al. (1968) found that a strong consensus emerged concerning the differing trait characteristics ascribed to men and women. Specifically, these researchers identified two clusters of personality descriptors, one believed to be more characteristic of men and one believed to be more characteristic of women. The list of characteristics associated with males included terms such as aggressive, independent, unemotional, competitive, objective, and logical. This grouping of traits was labelled a "competency" cluster due to the emphasis on ability, rationality, and assertion. In

contrast, the list of characteristics associated with females included terms such as talkative, tactful, gentle, aware of others' feelings, and easily expresses tender feelings. This grouping of traits was labelled a "warmth-expressiveness" cluster due to the focus on emotionality and concern for others. Broverman et al. (1972) found essentially the same pattern of results using groups of participants which differed in age, gender, religion, marital status, and education level. Research subsequent to that of Rosenkrantz, Broverman, and their colleagues went on to replicate these basic findings (e.g., Ruble, 1983; Spence, Helmreich, & Stapp, 1975).

Obviously society is not the same as it was when these landmark studies were conducted, and many changes have occurred with respect to the rights, roles, and responsibilities accorded to men and women. So many changes have occurred, in fact, and so much emphasis placed on equality and political correctness, that it is tempting to think that these gender stereotypes have faded and their influence waned over the past 30 years. Much more recent research, however, suggests that not only do gender stereotypes still exist, but that they continue to have a major impact on social perception.

Bergen & Williams (1991), for example, compared ratings of men and women as target groups made in 1972 and 1988 on a list of 300 adjectives. A high degree of similarity in responses was found, and these researchers concluded that few dramatic changes occurred in trait stereotypes over this time period. Street, Kimmel, & Kromrey (1995) asked a large number of students about their gender-role perceptions and found that women were described most in terms of a cluster of traits called "compassion," which included personality descriptors such as caring, compassionate, sensitive, romantic, loving, able to cry, emotional, gentle, and sentimental. Men, in contrast, were

rated relatively higher on traits signifying intellect, sexuality, and power.

Other research has confirmed that gender stereotypes have shown remarkable staying power (e.g., Deaux & Lewis, 1984; De Lisi & Soundranayagam, 1990; Helgeson, 1994). There is, however, some indication that at least the favourability or desirability of the traits in gender stereotypes has shifted somewhat, such that women's characteristic traits are viewed as more favourable whereas men's characteristic traits are viewed less favourable than they once were. Specifically, the more dated research of Rosenkrantz et al. (1968) and Broverman et al. (1972) found that, among the trait items they examined, the terms describing the typical male were rated consistently as more desirable than the trait terms describing the typical female. More recent research, however, has suggested that traits associated with women are gaining more positive evaluations and even being seen as more positive than the traits associated with men (e.g., Eagly & Mladinic, 1989; Street et al., 1995). As for the accuracy of gender stereotypes, Martin (1987) and Allen (1995) have provided evidence which suggests that much of the content of stereotypes are exaggerations of real self-reported trait differences, but that many of those real differences are very small.

Other studies tracing the development of these trait stereotypes indicate that they are established early and influence perceptions from kindergarten age or younger (Biernat, 1991; Martin, 1989). Moreover, these stereotypic beliefs may not be limited entirely to North American populations. In research covering over 25 different nations, Williams and Best (1982) observed considerable consensus in the perceived attributes of women and men.

It would appear, then, that although some changes in content and evaluative

quality have taken place, the overall content of gender stereotypes continues to be such that men and women are assumed to have different basic personality characteristics. An important point to note, however, is that current research suggests that, rather than being perceived as differing in *kind*, men and women are more likely to be perceived as differing in *degree*. That is, the typical woman usually is not regarded as being completely devoid of male-associated qualities, but as being characterized *less* by these qualities than the typical man. Similarly, the typical man is viewed not as totally lacking in female-associated traits, but as characterized *less* by them than the typical woman (Deaux, 1984; Spence, Deaux, & Helmreich, 1985). Nevertheless, these sorts of differences, even if only relative, certainly can have an important influence on social perception.

Gender Stereotypes of Emotion

Perceptions of Men's and Women's Emotional Character

The foregoing review of the overall content of gender stereotypes clearly suggests that emotion is implicated as an important component of stereotypical descriptions of men and women. Research has revealed repeatedly that women are viewed in more emotional terms than men. Indeed, it has been argued that this perception is one of the most pervasive and persistent components of gender stereotypes (Fischer, 1993), and that it is difficult to study or even address the issue of emotion without taking gender into account (Brody & Hall, 1993).

From the earliest studies women have been identified by social perceivers as more emotional than men. In the study by Rosenkrantz et al. (1968), for example, traits associated with males included: unemotional, hides emotions, not excitable in a minor

crisis, feelings not easily hurt, never cries, and able to separate feelings from ideas. Traits associated with females included: aware of feelings of others and expresses tender feelings. Similarly, in the international study by Williams and Best (1982), the terms hardhearted and unemotional appeared across countries on the list of male-associated items, while the items emotional and softhearted appeared on the list of female-associated items. In Street et al.'s (1995) recent study, women were defined primarily in terms of a cluster of descriptors that focussed on emotions. Furthermore, in a study of what it means to be emotional, Shields (1987) asked participants simply to name the most emotional person they knew. Over 80% of the participants, including both men and women, chose a woman as the person who they described as most emotional. Thus, the evidence clearly reveals that women are considered to be more emotional than men.

Gender and Experience vs. Expression of Specific Emotions

Despite all of this evidence from general studies of gender stereotypes which suggests that women are viewed as more emotional than men, some researchers have pointed to the inadequacy of focussing on the global descriptor of "emotionality." Fabes and Martin (1991), for example, have suggested that this limited conception actually has hindered complete understanding of the nature of emotion stereotypes. Specifically, these researchers argue that it is important to consider not only specific emotions separately, but also to distinguish between what people believe about the two separate dimensions of emotionality which include emotional experience and emotional expression.

Fabes and Martin (1991) conducted a study which focussed specifically on these aspects of gender stereotypes of emotion. In this study, participants were asked to rate the frequency with which groups varying on both gender and age typically experience and

express various specific emotions. Results revealed that, overall, female targets were perceived to express, but not experience, a wide range of both basic and complex emotions significantly more often than male targets. Fabes and Martin concluded that:

> [T]he perceived sex differences in emotionality were not as global as they are thought to be. For example, subjects did not deny that males experience a wide range of emotions; instead subjects' beliefs mainly concerned differences in the frequency with which males and females expressed the emotions they were believed to feel. With few exceptions, it appears that the stereotype that females are more emotional than males is based on a deficit model of male expressiveness (i.e., a belief that males do not express the emotions they feel). (p. 539)

Johnson and Schulman (1988) also conducted research which distinguished between perceived experience and expression of emotions, but this research focussed on *intensity* rather than *frequency* of experience and expression. Using a paradigm similar to that employed in studies of the secret self, these researchers asked participants to estimate the extent to which a male friend and a female friend would experience and display a range of affective reactions described as arising in particular contexts. Results revealed a replication of the basic secret self effect, such that both male and female targets were predicted to experience more feeling than they displayed. However, results specific to gender also emerged. That is, participants predicted that female targets would both experience and express emotions more than male targets. The difference for display was significantly greater than the difference for experience, however, thus suggesting that men and women are viewed as more alike in their experience of affect than in their expression of felt affect. Further analyses also revealed some specific differences based

on type of emotion for display estimations. Specifically, participants predicted that females would display communal or other-oriented feelings more, but individual, self-oriented feelings less, than males. Overall, however, results suggest that perceivers tend to believe that men and women differ more in their display of subjective affect than in their internal experience of those feelings.

Grossman and Wood (1993) similarly reported a tendency for participants to attribute more intense emotions to women than men. In this study, participants were asked to rate the intensity with which men and women typically experience and express the emotions of anger, fear, joy, sadness, and love. Stereotype ratings indicated that women were perceived both to experience and to express all of the emotions except anger with greater intensity than men. In contrast, men were perceived to experience and express anger more. These results are in accord with the argument that specific emotions must be studied as they relate to gender, because, despite the broad stereotype of women as more emotional, there are some emotions, such as anger, that may be associated more with men (Shields, 1986, 1987).

Actual Gender Differences in Emotion

Although the global stereotype of women as more emotional than men is pervasive, the question arises as to whether there is any accuracy to these perceptions. In other words, do women and men really differ in their experience and expression of emotion? It turns out that "the answer is neither simple nor straightforward" (Kring & Gordon, 1998, p. 698). However, although some conflicting results exist, the bulk of the evidence suggests that there is some validity to this emotional stereotype.

In the study of gender stereotypes conducted by Grossman and Wood (1993), for

example, participants also were asked to indicate the frequency and intensity with which they themselves experienced and expressed the five specific emotions. In this research, women reported feeling fear, joy, love, and sadness more frequently and more intensely than men, and also as expressing these emotions more frequently. However, there were no differences with regard to anger. In a second study, Grossman and Wood (1993) sought to examine multiple components of emotion by including both physiological and self-report measures. Thus, they included the physiological measure of electromyograph (EMG) assessments of facial muscle movements in order to examine the physiological component of emotion. Results revealed sex differences on both the self-report and the physiological indicators, suggesting that the women in this study showed a more intense emotional style that was represented as a general pattern or syndrome that included multiple components of emotion. Thus, women not only reported more intense emotional experience than men, but they also generated more intense physiological reactions.

Grossman and Wood's (1993) research is interesting and somewhat unique in this area because it sought to address more than one component of emotion, although several other studies also have attempted to assess the physiological component of emotion. In their review of prior research on sex differences in EMG responses to emotional events, Grossman and Wood (1993) reported a history of mixed results, with some studies indicating that women do produce more intense physiological responses, and others reporting no sex differences. Overall, these authors indicated that caution must be exercised in interpreting these results because in some studies it is unclear whether the EMG activity was part of an emotional reaction or represented some other type of response. In a separate review of studies on sex differences in physiological responses to

emotion, Kring and Gordon (1998) similarly reported that the few studies which have included such measures as skin conductance, heart rate, and measures of facial expression have produced mixed results, leaving it unclear as to whether men and women differ in their physiological reactions to emotion.

More common than the studies of physiological responses are those which focus on subjective self-reports, and these studies of emotional intensity have corroborated the idea that women are more emotional than men. That is, women overall tend to report experiencing emotions to a greater degree than men, both in terms of specific positive and negative emotions as well as characteristic level of emotional intensity (e.g., Allen & Haccoun, 1976; Diener, Sandvik, & Larsen, 1985; Fujita, Diener, & Sandvik, 1991; Grossman & Wood, 1993; Robinson & Johnson, 1997). Kring and Gordon (1998) argue that the evidence suggesting that women *display* their emotions more than men is even more persuasive, indicating a parallel with stereotypes of emotion. That is, men and women are perceived to differ more in terms of expression than experience of emotions, and studies of emotion suggest that this may in fact be the case.

Despite all of this evidence suggesting that gender stereotypes of emotion may have some basis in reality, other research has revealed no differences in frequency or intensity of experience between men and women (e.g., Averill, 1982, Oatley & Duncan, 1992, 1994). Anger in particular stands out as an emotion which has been stereotypically associated with men, but which has not been found to differ experientially or expressively among men and women (e.g., Averill, 1982; Grossman & Wood, 1993). However, with the caution that a definitive statement must await further research, it may be said that, overall, the bulk of the evidence points to greater experience and expression of emotions

by women.

Summary and Implications of Gender Stereotypes of Emotion

Research documenting beliefs about the qualities of men and women suggests that women are perceived as more emotional than men. Some researchers have pointed out, however, that when considered in detail, this emotional stereotype applies considerably more to emotional expression than emotional experience, and applies more strongly to specific emotions. Emotions such as fear and sadness are mostly associated with women whereas anger stands out as an emotion that is consistently associated with men.

The foregoing review suggests that the stereotype of women as both experiencing and expressing at least certain of their emotions to a greater extent than men may have some basis in reality. That is, research has revealed that women seem to be at least somewhat more likely to experience and express emotions to a greater extent than men. However, regardless of their accuracy, gender stereotypes can exert a powerful influence over social and self-perceptions as well as social interactions. Grossman and Wood (1993), for example, found that the extent to which individuals endorsed stereotypical differences between men and women actually predicted self-reported emotional experiences. These researchers found that they could eliminate gender differences in self-reports of emotional intensity by manipulating the expectations of participants. That is, by telling participants that previous research had shown no relationship between gender and emotionality (thus negating the stereotype), the gender-related differences in self-reported emotional reactions disappeared.

Thus, recent research suggests that, not only do gender stereotypes exist, but they continue to have a major impact on social perception. In fact, one manner in which

stereotypes have been shown to influence social perception is through perceptions of the causes underlying observed behaviour. That is, stereotypes have been found to affect the explanations observers derive about the behaviour of others. At this point, then, the theoretical analysis has come full circle back to a discussion of attributions. This link between these social psychological phenomena and others will be discussed briefly in the next section prior to a description of the current research.

Theoretical Synthesis and Research Directions

Several important observations regarding implicit theories of emotion can be gleaned from the foregoing review. Attribution theory has provided the insight that emotions may be perceived both by experiencers and observers as occurring as a result of internal or external factors. Research on this topic has suggested that, overall, emotions are perceived as being caused by factors external to the person. There are, however, circumstances in which dispositional attributions become prevalent, such as when observers explain the negative emotions of others. Implicated in these types of explanations may be judgments about the appropriateness of the emotional response, or the extent to which the experienced and the expressed response match the emotional stimulus or trigger. That is, it has been argued that attributions to dispositional causes may imply the perception that the emotion is an over-reaction or does not match the eliciting stimulus (Karasawa, 1995). The extent to which own and others' emotions are perceived as appropriate to specific situations and the relation of appropriateness to attributions is in need of investigation.

With regard to controllability, there is some evidence that emotional expression is seen as more controllable than emotional experience, although the nature of the

relationship between perceptions of control and perceptions of locus of causality has not been examined in emotion research. Attributions also have been implicated in social comparison research, and studies in this area have shown that individuals tend to think that they experience their own emotions with greater intensity than do others. However, individuals apparently do not correspondingly think that they show their emotions more than others; in contrast, they tend to believe that they keep more of their emotions hidden. The extent to which this applies to real experienced emotions, however, is not known.

Despite all of the research documenting actual gender differences in self-reports of emotion as well as the pervasive stereotype of women as more emotional than men, studies of attributions for emotion have not taken target gender into account. Other research has confirmed that stereotypes can, in fact, have an important effect on causal reasoning (e.g., Deaux & Emswiller, 1974; Feldman-Summers & Kiesler, 1974; O'Leary & Hansen, 1984; Yarkin, Town, & Wallston, 1982). Specifically, the effects of stereotypes on causal attributions have been examined on the basis of the assumption that stereotypes provide expectations concerning the typical and appropriate behaviour of persons from particular social categories. In general, results have suggested that stereotype-consistent behaviour is attributed to internal, stable causes, whereas behaviour that is inconsistent with preconceived stereotype-based expectations is ascribed to external factors or to internal, unstable causes (Jackson, Sullivan, & Hodge, 1993). In general, these results are in line with the observation that individuals have a tendency to maintain a state of balance or consistency among their cognitions in the sense that explanations of behaviour are made to be consistent with stereotype-based expectations. Thus, it would appear that stereotypes can have an impact on the kinds of attributions that

are made for the behaviour of members of particular social groups.

Given the robust gender stereotypes that exist concerning emotional experience and expression, it is essential to consider target gender in studies of attributions for emotion, and it is reasonable to hypothesize that this variable will have an effect. The research on stereotype-driven attributions suggests that the pervasive perception of women as more emotional than men may result in different attributions for the observed emotions of women and men. Specifically, women are expected both to experience and express their emotions intensely and openly, and therefore observers may be more likely to attribute women's emotions to internal or dispositional causes. Men, on the other hand, are expected to experience and express less emotion, and therefore attributions for their emotions may be more external, with the possible exception of anger.

More generally with regard to the relation between gender and emotion, further research is needed to clarify the extent to which men and women actually differ in their experience and expression of various emotions. With regard to gender stereotypes, several researchers have argued that despite the fairly large amount of research on perceptions of men and women, there has been relatively little effort to define certain details of the content of those stereotypes (Deaux & Lewis, 1984; Brody & Hall, 1993 ; Johnson & Schulman, 1988). In fact, in terms of gender stereotypes of emotion, Brody and Hall (1993) have argued that "these stereotypes, as well as the actual behaviours that they imply, deserve much elaboration" (p. 447). Thus, any research which further elaborates the nature of the relation between gender and emotion, as is the intention of the current project, is a welcome addition to this body of literature.

Some attempts have been made to consider gender stereotypes and social

comparison, such as Johnson and Schulman's (1988) study which showed that, although women were perceived to experience and express emotions more intensely than men, the perceived difference was larger for expression. In another interesting study relevant both to gender stereotypes of emotion and social comparison, Robinson and Johnson (1997) presented participants with written descriptions of troubling situations designed to be interpreted as inducing both stress and negative emotion. Upon reading each scenario, participants were asked to indicate whether the situation would be primarily stressful or primarily emotional for self or average woman or average man. They also were asked about how extreme they thought the target's reaction would be.

Results from this study revealed that participants believed that the average woman would feel emotional more than she would feel stressed, whereas the average man would feel stressed more than he would feel emotional (Johnson & Schulman, 1988). In addition, women's reactions were predicted to be stronger than men's reactions, particularly when that reaction was labelled as reflecting emotion rather than stress. Interestingly, male and female participants did not differ in the label that they used to describe their own emotional experiences, but they both did believe that they would experience emotion more often than the average man but less often than the average woman. In terms of intensity, "[m]en thought that they would experience less intense stress, but more intense emotion than the typical 'stoic' male. Women, by contrast, thought they would experience more intense stress, but less intense emotion, than the typical 'emotional' female" (Robinson & Johnson, 1997, p. 247). This pattern of results suggests that both women and men somewhat distanced themselves from perceived gender stereotypes and rated themselves as being unique as compared to others. Thus, it

would appear that individuals may not view themselves as corresponding particularly well to common stereotypes.

A considerable weakness of many social psychological studies of emotion, including most of those described above, is that they have relied almost exclusively upon very brief hypothetical or imagined emotional situations (e.g., Johnson, 1987; Johnson & Schulman, 1988; Johnson et al., 1988; Karasawa, 1995, Lui et al., 1992), or estimations of global emotion frequency or intensity (e.g., Grossman & Wood, 1993; Fabes & Martin, 1991), rather than focussing on real experienced emotions. The study of these phenomena within the context of real remembered emotions, and the use of these to construct rich, realistic emotion scenarios for use as experimental stimuli, will be another novel aspect of the series of studies proposed here.

In summary, despite the informative research which already has been conducted with regard to attributions, social comparison, stereotypes, and emotion, several important questions remain unanswered regarding the role that these processes play in implicit theories of emotion. The present investigation will focus on these factors within the context of an analysis of how individuals perceive their own emotions and those of others, and how gender as both a participant and a stimulus variable affects perceptions of emotion. In addition to adding to social psychological knowledge in these areas, the current program of research is intended to provide a source of hypotheses for further work concerning emotions in social interaction, and to lay the theoretical foundation for further research in this area.

The Current Research

Research Questions and Objectives

The foregoing review and analysis has provided a summary of research and theory relevant to the issue of implicit theories of emotion, or how people perceive and explain their own emotions and those of others. Overall, however, we still know relatively little about social perception of emotion and the implications of these perceptions for social behaviour. The purpose of the present research is to extend our knowledge in this area. In general, the objectives of this research are to provide a richer and more comprehensive understanding of perceptions and explanations of own and other's emotions, as well as to explore the effects of gender on these perceptions. More specifically, the research questions may be stated as follows:

(1) How do individuals perceive their own emotions in terms of intensity, appropriateness, consensus, locus of causality, and controllability?

(2) How do observers perceive the emotions of others in terms of these factors?

(3) To what extent does gender affect perceptions of emotions?

Investigation of these factors contributes not only to our understanding of the phenomenology of emotional experience as well as implicit theories of emotion, but also more generally to the processes of attribution, social comparison, and gender stereotyping. Hypotheses for these studies were derived from previous theory and research from each of these domains; however, it shall be stated at the outset that some aspects of the current project are exploratory and intended to provide a foundation for future work in this area.

General Overview

Three Studies

Three studies were conducted as part of a program of research examining the nature of implicit theories of emotion. The purpose of Study 1 was to assess individuals' perceptions of their own experience and expression of emotions in terms of intensity, appropriateness, consensus, locus of causality, and controllability. Recall from the literature review that these social psychological phenomena have been implicated as relevant to the study of emotions. A comparison of male and female respondents also was made in order to assess gender differences in self-reports of emotion.

Given that Study 1 relied on retrospective self-reports, it seemed possible that any differences in the reflective judgments of male and female participants could have been due to differences in the qualities of the emotional situations that were reported, rather than simply in the reactions to them. Study 2, therefore, was designed to investigate this possibility by obtaining "objective" ratings of the emotional situations described in Study 1. This was accomplished by removing gender information from the descriptions and having a new group of participants rate them on intensity of emotion elicited by the situation. This methodology also allowed a comparison to be made between male and female observers' perceptions of emotional situations or emotion triggers. For ease of reference, note the use of the terms "emotional situation" and "emotion trigger" in this context to refer to the events or circumstances that contributed to the onset of emotion; this terminology will help to maintain the conceptual distinction between the events that led to an emotion or the circumstances in which it arose (the *trigger* or the emotional situation), the qualities of the emotional *experience* or *feeling*, and the qualities of the

emotional *expression* or *display*.

Study 3 followed directly from Studies 1 and 2, and was designed to allow a more direct examination of the effects of gender stereotypes on perceptions and explanations of emotion. In this study, participants were presented with scenarios describing individuals in emotional situations. The scenarios were constructed based on the emotion descriptions provided in Study 1 and objectively evaluated in Study 2. Across participants, target gender and response intensity were varied systematically. This methodology permitted an examination of the effects of target gender and response intensity on observers' perceptions of intensity, appropriateness, consensus, locus of causality, and controllability for a variety of emotional responses.

Four Emotions

The same four emotions were investigated in each study. The four emotions were anger, anxiety, happiness, and sadness. Three criteria guided the choice of emotions for study: (1) theoretical considerations, (2) everyday understanding considerations, and (3) practical considerations. In terms of emotion theory, the emotions of anger, fear, happiness, and sadness appear in the schemes of almost all categorical theorists, and are widely believed to constitute basic emotions (e.g., Ekman & Friesen, 1975; Izard & Buechler, 1980; Oatley & Johnson-Laird, 1987; Plutchik, 1984, 1991; Tomkins, 1980). This is supported by evidence that these four emotions are among the first that children learn and communicate about as their understanding of emotion develops (see Shaver, Wu, & Schwartz, 1992). Moreover, these emotions have been studied often by researchers attempting to describe the frequency, intensity, causes, and effects of real emotional experiences (e.g., Grossman & Wood, 1993; Oatley & Duncan 1992, 1994;

Oatley & Larocque, 1995; Scherer et al., 1983; Wallbott & Scherer, 1986).

With regard to everyday understanding of emotions, research has shown that anger, fear/anxiety, happiness, and sadness are reported as good examples of the category of emotion (Fehr & Russell, 1984; Shields, 1984). Moreover, there appears to exist a high degree of similarity in the emotion concepts of different languages, with these four emotions among the most frequently mentioned for 11 language groups (Fridja et al., 1995). Thus, these emotions appear to feature prominently in people's implicit theories (Shaver, Schwartz, Kirson, & O'Connor, 1987). Anxiety, which will be used as an emotion type in this study, is commonly perceived to be a subcategory of fear (Shaver et al., 1992), and has been included in many studies of emotion as a variant of the fear category (e.g., Oatley & Duncan, 1992, 1994; Oatley & Larocque, 1995; Reisenzein & Hoffman, 1990).

The greater number of negative as compared to positive emotions studied in most research reflects the fact that positive emotions seem, overall, to be less well-differentiated than negative emotions (Averill, 1980; Ellsworth & Smith, 1988b). Furthermore, research on gender stereotypes of emotion has implicated at least three of these emotions as differentially characteristic of women and men. Specifically, sadness and fear are associated more often with women, whereas anger is associated more often with men (Shields, 1987).

Although few specific predictions were made with regard to the four emotions, prior research has demonstrated that emotion-specific patterns may exist in other domains. For example, appraisal studies have revealed that differing cognitive evaluations are associated with the onset of different emotions (e.g., Ellsworth & Smith,

1988a, 1988b). Similarly, attribution studies have suggested that observers' reactions to the emotions of others differ across specific emotion categories (Karasawa, 1995). Thus, previous research suggests that, even when other variables and relations are of greater concern, it is important to take into account a consideration of different emotions. Accordingly, although few specific hypotheses for emotion type were articulated in advance, differences among the four emotions were examined and significant results reported as appropriate, especially as they apply to qualifying the relations among the main variables of concern.

Study 1

Overview

The first in this series of studies was designed to elicit people's perceptions of their own emotions in terms of intensity, locus of causality, appropriateness, consensus, and controllability. The purpose of this study was threefold. First, asking participants to describe and evaluate aspects of their real experienced emotions allowed for a detailed description of how individuals view their own emotions and how they think they compare to others. Second, it was possible to examine the influence of gender by comparing the judgments of male and female participants on these factors. Finally, the descriptions of emotion collected in this study formed the basis for the materials used in subsequent studies.

In this study, participants were asked to recall recent incidents of experienced emotion, write down a description of those incidents, and then rate them on the relevant dimensions. These types of retrospective self-reports are used commonly in emotion research (e.g., Ellsworth & Smith, 1988a, 1988b; Fridja, Kuipers, & ter Schure, 1989;

Scherer et al., 1983; Scherer & Wallbott, 1994), and, although there are obvious problems inherent in studying what is basically a very private phenomenon, many emotion researchers agree that the use of remembered emotions is an important and viable method of accessing the internal thoughts and feelings that are associated with emotional experience. Indeed, given that emotions theoretically are described largely in terms of subjective experience, it would appear that direct questioning is one of the few ways to assess what is actually being experienced.

Further with regard to self-reports, research has shown that people actually can be very articulate about their emotions. In interviews, for example, participants have been able to describe the causes of experienced emotions, the time and circumstances in which they occurred, the target of their reactions, and the plans that their emotional experiences prompted (Oatley & Duncan, 1992). In other words, people are able to communicate about the causes, accompaniments, and effects of their emotions. And here we are talking about emotions that are important enough for people to attend to, reflect upon, and discuss with others. These are the emotions that both everyday and scientific theories strive to explain (Oatley & Duncan, 1992).

In Study 1, data were collected for each of the four emotions using a questionnaire which was constructed specifically for the purposes of this research. The questionnaire had three broad components. First, participants were asked to recall and describe a particular emotion that they could remember well. Second, participants were asked to rate aspects of their internal experience, or the way they were feeling inside during the emotional episode. These questions, which were designed to investigate aspects of emotional experience separately from emotional expression, related to

perceived intensity, locus of causality, appropriateness, consensus, and control over experience. Finally, participants were asked to describe and respond to a set of questions relating to the manner in which they expressed the emotion, or the way they showed it outwardly. These questions similarly related to perceived intensity, appropriateness, consensus, and control, and therefore they could be compared to the analogous questions for experience.

The overall design of Study 1 included the following factors: (a) participant gender, which was a 2-level between-participants factor, and (b) emotion type, which was a 4-level within-participants factor (anger, anxiety, happiness, and sadness). Thus, male and female participants were asked to describe and rate an occurrence related to each of the four emotion types, resulting in a 2 x 4 factorial design. In addition, because participants made some of the same ratings for both experience and expression, emotion domain (experience vs. expression) was used as a within-participants factor in some of the analyses. Furthermore, attribution type (internal vs. external) was used as a within-participants factor in one of the analyses in order to test hypotheses regarding locus of causality. Hypotheses are described according to each of the dependent measures.

Hypotheses

Intensity of Experience and Expression

The design of the questionnaire required participants to provide judgments of their emotional experience, or the way they were feeling inside, separately from judgments of their emotional expression, or the way they showed their emotion outwardly. Thus, participants were asked to indicate the intensity with which they felt the emotion under consideration, as well as the intensity with which they expressed it. In

accord with research on hidden affect or the secret self (e.g., Johnson, 1987; Johnson et al., 1988; Struthers & Johnson, 1991), it was predicted that participants would report experiencing more emotion than they expressed. This would be revealed by a main effect for emotion domain such that participants would report feeling the emotion more intensely than they displayed it outwardly.

In addition, because males and females have been found to differ in the self-reported intensity with which they experience and express their emotions, a main effect for participant gender also was expected such that females would rate both their emotional experiences and their emotional expressions as more intense than males. The one possible exception involved the emotion of anger; however, despite the stereotypical association of anger with males, research often has revealed no differences in the self-reported anger of males and females (e.g., Averill, 1982; Grossman & Wood, 1993).

Of course, these hypothesized gender differences were based on the assumption that males and females would report and rate comparable types of emotional events. It seemed possible, however, that any observed differences in intensity or other perceptions could be due to differences in the qualities of the emotional situations that were reported. For example, females might report greater emotional intensity because they correspondingly reported more intense emotion triggers. This possibility was explored in Study 2.

Locus of Causality

Perceptions about locus of causality, or the extent to which emotions are attributed to internal versus external factors, were assessed in this study only for emotional experience. This is because the concern here is with the perceived causes of

the underlying feeling rather than the expression of the emotion. For this analysis, attribution type (internal vs. external) was used as a within-participants factor. Based on attribution research which has indicated that, in general, emotions are attributed mostly to external factors, it was hypothesized that participants would attribute their emotions more to external as compared to internal factors. That is, a main effect for attribution type was expected such that attributions to external events would be greater than attributions to internal factors including one's own mood or personality. The extent to which locus of causality attributions varied across participant gender and emotion type also was explored.

Appropriateness

Within the context of this research, questions about appropriateness were meant to capture the extent to which there was a perceived match or fit between the magnitude of the emotional trigger and the intensity of the emotional reaction. That is, these questions were designed to assess the extent to which the reaction was perceived to be appropriate or fitting as compared to an under-reaction or an over-reaction. Like intensity, appropriateness was assessed separately for experience and expression. That is, participants were asked to indicate the extent to which both their feeling and their display of each particular emotion was fitting in the given situation, as compared to an under-reaction or an over-reaction.

In view of the research on attributions for emotion which suggests that emotions are attributed mostly to external factors (e.g., Karasawa, 1995; Lui et al., 1992), and in accord with theory and research on false consensus and other self-serving biases (e.g., McFarland & Miller, 1990), it was predicted that participants in general would rate their

emotional experiences as appropriate given the eliciting circumstances. That is, it was hypothesized that participants would rate their own emotions as matching the magnitude of the trigger, rather than as under- or over-reactions. This effect would be revealed by responses indicating that experience and expression were appropriate as compared to under- or over-reactions.

Consensus

The extent to which participants perceived consensus for their emotions also was assessed separately for experience and expression. Recall that consensus in this context refers to the extent to which others are estimated as reacting similarly. Thus, participants were asked to indicate the extent to which they thought that most other people would feel and show less, more, or the same amount of the particular emotion under consideration in the circumstances described.

Based on relevant prior research, several outcomes seemed possible with regard to consensus. The first was that, because of the external attributions that are made for emotion, experiencers would estimate that others would feel and show their emotions to the same extent as they themselves did. This effect would be revealed by responses indicating that others would experience and express the "same amount" of the emotion in those circumstances. However, research on false consensus and uniqueness effects suggests that individuals tend to estimate greater consensus for their negative and neutral traits and behaviours, while estimating less consensus (or greater uniqueness) for their more positive qualities (e.g., Goethals, 1986; Goethals et al., 1991). These findings suggest that perceptions of consensus might differ across emotion type, such that individuals would perceive greater consensus for their negative emotional experiences

and expressions (anger, anxiety, and sadness), than for their positive emotions (happiness).

Research specific to perceived consensus for emotions suggested another possible outcome. This research has shown that individuals tend to perceive themselves as experiencing *both* positive and negative emotions with greater intensity than others, but showing only positive emotions more than others (e.g., Johnson, 1987; Johnson et al., 1988; McFarland & Miller, 1990). Thus, participants might be expected to rate others as feeling less of all emotion types, but showing more of the negative emotions. All of these possible outcomes for consensus were explored.

Control

Similar to the questions for appropriateness and consensus, participants were asked separately about the extent to which they were in control of the amount of the emotion that they were feeling and showing. Given the greater perceived volitional nature of behaviour as compared to affect (e.g., Zuckerman & Feldman, 1984), it was hypothesized that participants would report feeling greater control over the expression of their emotions than over the experience of their emotions, and this would be revealed by a main effect for emotion domain. Although the stereotype of women suggests that their greater emotionality includes not only more intense experience and expression of emotions but also less capacity for self-control, the extent to which this characterizes reports of real emotions remained to be determined. This issue also was investigated in the present study, although no formal predictions were advanced.

Method

Design

Study 1 employed a 2 x 4 (Participant Gender x Emotion Type) factorial design. Participant gender was a between-participants factor, and emotion type was a within-participants factor. The design of the questionnaire allowed attribution type (internal vs. external) and emotion domain (experience vs. expression) to be used as within-participants factors for some of the analyses as appropriate.

Questionnaire

Participants responded to the same questionnaire for each of the four emotions (anger, anxiety, happiness, and sadness). All parts of the questionnaire are detailed in the following sections, and Appendix A provides a sample of the questionnaire for the emotion of anger. Note that 9-point scales were used throughout all of the studies in this series. The scales ranged from *0* through *8* for questions in which scale anchors indicated "not at all" to "very much" of some quality. However, for scales in which the anchors denoted "very much" of one quality through to "very much" of some opposite quality, such as "very much an under-reaction" to "very much an over-reaction," the scales ranged from *-4* through *0* to *+4*. Note also that some questions that were asked with regard to *experience* of emotion later were asked in an analogous manner with regard to *expression* of emotion. That is, participants were asked about perceived intensity, appropriateness, consensus, and control for both their experience and expression of the particular emotion under consideration.

Each item on this questionnaire is described here according to the domain to which it refers (experience or expression) following the order of the items on the

questionnaire. Each question is described in detail at this point because many of these same items also were employed in Study 3 in only slightly modified form.

Retrospective Reports of Emotion. In order to elicit self-reports of emotion, participants were asked to think about a time during the past month or two during which they experienced the specific emotion under consideration. Given that diary studies of emotion have suggested that participants tend to notice approximately one salient emotion per day (Oatley & Duncan, 1994), the time period of the past one to two months was chosen in order to allow a reasonable time frame within which participants could have experienced each emotion, while at the same time keeping events relatively recent so that they could be remembered well. Participants were free to report any kind of emotional experience of the nature requested, with the stipulations that it be specific and they could remember it well. Space was provided for a written description of the event, and participants were encouraged to include details relating to specific thoughts they had, things that happened, or things that people said or did. They also were asked not to describe the way they expressed their emotion because they would be asked about this later in the questionnaire. Participants were encouraged to be as descriptive as possible in a brief summary (see Appendix A, question 1). In this way, participants provided detailed information about the events or circumstances that elicited or triggered the emotion under consideration. Note that it is these descriptions of the eliciting emotional triggers that were later objectively evaluated by new participants in Study 2.

Ratings of Emotional Experience. After the written description of the emotional situation was completed, instructions on the questionnaire informed participants that they next would be asked to respond to some questions about their emotional *experience*, and

that these questions would focus on their *internal feelings* or *the way they felt inside.* The purpose of these detailed instructions was to ensure that participants assessed separately, to the best of their abilities, their emotional experience as opposed to their emotional expression.

Participants first were asked to rate how intensely they experienced the emotion, using a 9-point Likert scale that ranged from *very mild* (0) to *very intense* (8). The center of the scale was labelled *moderate* (4), and synonyms were used as appropriate to describe differing intensities of the emotion in order to more clearly convey the gradation of intensity. On the scale for anger, for example, the very mild pole was labelled *annoyance or very mild anger* (0), the mid-point of the scale was marked *moderate annoyance or anger* (4), and the intense pole was labelled *very intense anger* (8) (see Appendix A, question 2).

Following the intensity measure, participants were asked about the extent to which the emotion they reported was caused by internal versus external factors. More specifically, participants were asked to indicate the extent to which their emotion was a result of (a) some specific event such as something that happened or something that someone else did (external), and (b) something about themselves, such as their personality or the mood they were in before they became angry (internal). These questions were answered using 9-point scales that ranged from *not at all* (0) to *very much* (8) (see Appendix A, questions 3 and 4).

In order to examine the extent to which experienced emotions were viewed as appropriate or as matching the emotional trigger, participants were asked to indicate the extent to which the amount of the emotion they were feeling was fitting in those

circumstances as compared to an under- or over-reaction. Ratings were made on a 9-point scale that ranged from *extreme under-reaction* (-4) to *extreme over-reaction* (+4). The mid-point of the scale was labelled *very fitting reaction* (0), with the remaining negative values denoting slight, moderate, and strong under-reactions, and the remaining positive values denoting slight, moderate, and strong over-reactions (see Appendix A, question 5).

In order to test predictions concerning perceptions of consensus, participants were asked to indicate the extent to which they thought that others would feel the same amount of the emotion under consideration if they were in the same situation. Ratings were made on a 9-point scale. The scale for anger ranged from *most people would feel very much less anger than I did* (-4) to *most people would feel very much more anger than I did* (+4). The midpoint of the scale was labelled *most people would feel the same anger as I did* (0), with the remaining negative values denoting slightly, moderately, and much less anger, and the remaining positive values denoting slightly, moderately, and much more anger (see Appendix A, question 6).

In order to test predictions concerning perceived control over emotional experience, participants were asked to rate the extent to which they were in control of the amount of the emotion they were feeling inside. This was done using a 9-point scale that ranged from *not at all in control* (0) to *very much in control* (8) (see Appendix A, question 7).

Ratings of Emotional Expression. Again, written instructions on the questionnaire informed participants that a change in perspective was required. Specifically, instructions stated that the next set of questions would concern the way they *expressed* their emotion, or *the way they showed it outwardly*. Expression was defined as including things such as

the way they looked, the way they acted, what they said, and what they did.

The first question asked about the extent to which they showed their emotion outwardly, and participants were asked to circle a number on the scale that best described how intense their expression of the emotion was. The scale was the same as that used for rating intensity of experience. For the emotion of anger, for example, the very mild pole was labelled *annoyance or very mild anger* (0), the mid-point of the scale was marked *moderate annoyance or anger* (4), and the intense pole was labelled *very intense anger* (8) (see Appendix A, question 8). The purpose of using the same scale was to ensure that ratings of intensity of expression would be directly comparable to ratings of intensity of experience.

Next, participants were asked to describe the way in which their emotion showed. Specifically, they were informed that they should include a description of the way they looked, the way they acted, what they said, and what they did (see Appendix A, question 9). Perceived appropriateness of expression was assessed using the same type of 9-point scale as for appropriateness of experience. That is, the scale ranged from *extreme under-reaction* (-4) to *extreme over-reaction* (+4), with the mid-point of this scale labelled *very fitting reaction* (0) (see Appendix A, question 10).

In order to assess consensus for expression, participants were asked to rate the extent to which they thought that other people would show their emotion if they were in the same situation. Similar to the consensus question for experience, this was done using a 9-point scale that ranged from *most people would show very much less anger than I did* (-4) to *most people would show very much more anger than I did* (+4). The midpoint of the scale was labelled *most people would show the same anger as I did* (0) (see Appendix

A, question 11). Finally, in order to test predictions relating to control over expression, participants were asked to indicate the extent to which they were in control of the amount of emotion they were showing or not showing. This was done using the same type of 9-point scale that was used to assess perceived control over experience which ranged from *not at all in control* (0) to *very much in control* (8) (see Appendix A, question 12).

Introduction

Prior to beginning the study, an Introduction sheet which described the nature of the study was distributed to all participants and read aloud by the experimenter (see Appendix B). The purpose of the introduction was to outline the procedure and to describe for participants how they should go about reporting their emotions. Specifically, participants were informed that they would be asked to describe and answer questions about four different emotions. They were told that they should choose emotional experiences that they could remember well and to describe them as clearly as possible. As well, they were asked to describe totally *separate* experiences for each emotion; that is, they were told not to describe the same events for different emotion types. They also were informed that there would be separate questions concerning emotional experience as compared to emotional expression and that they should read the questions carefully in order to know which emotion domain they were responding to. Participants were assured of the anonymity of their responses and encouraged to complete the questionnaires as openly and honestly as possible. They also were reminded that they were present on a voluntary basis and that they were free to withdraw from the study at any time without penalty should they no longer wish to participate (see Appendix B).

Post-Experimental Questionnaire

After completing the emotion questionnaires, participants were given a post-experimental questionnaire (PEQ) which was designed to examine the manner in which they approached the experimental task. Given the personal nature of the study and the open-ended nature of the description questions, the post-experimental questionnaire was fairly extensive and designed to provide as much information as possible about the procedure (see Appendix C). The first question on the PEQ asked participants if they had any difficulty recalling any particular emotions that they were asked about in the study, and, if so, which one(s). The second question asked if participants had any difficulty describing their emotions in words. If they answered "yes" to this question, participants were asked to explain why it was that they had such difficulties. In response to this item, participants could check one of two pre-determined responses, or create their own reply. The pre-determined responses included "emotions are very private, difficult to talk about," and "it's just hard to put those kinds of feelings into words" (see Appendix C, question 2).

The third item on the PEQ simply asked participants in a yes or no format if they had any difficulty with the rating scale questions. The fourth item addressed the fact that participants were asked the same questions twice about their emotions, once with regard to their emotional experiences or feelings, and once with regard to their emotional expressions or displays. For this item, participants first were asked simply if they were able to separate their thinking about how they felt the emotion from their thinking about how they showed the emotion. (see Appendix C, question 4a). Next, participants were asked if they had any particular ideas about how they were supposed to respond when

they were asked the same questions twice for each emotion. There were three particular response options to this demand characteristics item. Specifically, participants could state that they thought they were supposed to respond the "same" to both sets of questions, that they thought they were supposed to respond "differently" to each set of questions, or that they didn't really think about how they were supposed to respond and "just answered the questions" (see Appendix C, question 4b). The final item on the PEQ asked participants if they had any other questions or comments about the study.

Procedure

Participants completed the questionnaires in a small laboratory in groups of up to 10. Seating was arranged to ensure privacy. Upon arrival, participants were told that the purpose of the study was to investigate the experience of common emotions, including the kinds of things that lead people to feel certain emotions such as anger, anxiety, happiness, and sadness. The Introduction sheet (see Appendix B) was provided and read aloud by the experimenter after which informed consent was obtained using standardized consent forms (see Appendix D).

Following the introduction to the study, each participant was given four questionnaires representing the four emotions. Participants completed all of the questionnaires at their own pace. To control for possible emotion order effects, the order in which emotions were responded to was completely randomized across participants. After completing all of the emotion questionnaires, participants responded to the PEQ (see Appendix C).

Before leaving the study, participants were given an additional consent form which explained that the researchers would like to have the emotion descriptions that

they provided for use in similar subsequent studies. Participants were reminded that all of their responses always would remain completely anonymous and that they never could be personally identified. Participants then were asked to provide informed consent for their reports to be used in future research. This was done using an additional standardized consent form (see Appendix E). Information forms describing the purpose and results of this study were made available to all participants once the data collection and analysis phase of the final study was complete (see Appendix F).

Participants

An a priori sample size analysis indicated that 40 male and 40 female participants would be minimally appropriate for this study. This sample size was determined on the basis of two factors. First, because the most critical comparisons were between male and female participants as well as between other within-participants factors (including emotion domain and attribution type), it was determined that this number of male and female participants would provide adequate power (.70) to detect significant effects of moderate magnitude (effect size = .30) for these analyses. Second, practical considerations required a limitation on the number of participants. That is, because all of the emotion descriptions had to be typed and edited by the experimenter and then rated by participants in Study 2, the number of descriptions obtained had to remain manageable.

In total, 44 male and 49 female participants took part in the study. These participants were recruited from Introductory Psychology classes at the University of Manitoba. Separate sign-up booklets were used in order to try to approximate equal numbers of male and female participants. Space was provided for up to 10 participants to

sign up for any one session, with room for five males and five females. As per the policy of the Psychology Department at the University of Manitoba, participants received experimental credits toward their class grades for participation.

Some further details regarding the sample for this study are described here. Specifically, data from three male participants were not used in the final analyses for the following reasons: one male participant reported having a serious anxiety disorder which he felt affected his responses (and which were apparent in some of his descriptions), and two male participants provided emotion reports that were not readily comprehensible due to the manner of presentation (one of these participants appeared to have difficulty with the language and the other provided descriptions in some type of thought-listing format). In total, then, data were available from 41 male and 49 female participants. However, data from two other participants were not included in the analyses because these participants did not complete the full set of four questionnaires. Specifically, one male did not provide responses for the emotion of anxiety because he stated that he did not experience any anxiety recently, and one female did not provide responses for anger because of time limitations during the study. Data from these participants were excluded from the final sample in order to achieve consistency in sample size across the different types of analyses. Finally, with regard to consent, one female participant declined to participate after hearing the initial instructions (and therefore was never included in the sample at all), and one of the male participants whose data already were excluded as described above did not sign the additional consent form allowing responses to be used in subsequent research. All other participants readily agreed to participate in the study and agreed to allow their data to be used in subsequent studies. Thus, data from 40 male and

48 female participants were included in the final data set used for all of the analyses reported below.

Analyses

At this point, prior to a description of the statistical evaluations of the rating scale data, it seems important to address in a more global or descriptive manner the nature of the emotion data that were collected in Study 1. Given that participants in this study were asked to recall and share events that not only were very personal but also very subjective and potentially difficult to describe, the question arises as to whether or not participants were willing and/or able to become involved enough in the task to access and openly share emotional experiences that were meaningful to them. Observation of participants during experimental sessions and examination of the emotion descriptions suggested strongly that participants were able to become involved in the task and were able to describe real, meaningful emotional events. Although several participants reported having difficulty recalling some specific emotions, all but two were able to complete the task without any other apparent troubles. Some participants even appeared to become somewhat emotional as they prepared their descriptions, almost certainly as a result of thinking about the particular event they were describing. Overall, observations of participants during experimental sessions suggested that they were able to invest themselves in the task and that they filled out the emotion questionnaires both thoughtfully and carefully (note that more information about the manner in which participants approached the task will be addressed in the section on PEQ responses).

Examination of the emotion descriptions themselves supported the above-reported observations. Specifically, the collection of descriptions included an extremely wide

variety of emotional situations and responses, ranging from those that appeared to be relatively mild to those that appeared to be extremely intense. The huge variability in the nature of the descriptions prevents a detailed discussion of their contents in this report; thus, a very selective and brief sampling of the kinds of descriptions that were provided will have to suffice. For the emotion of anger, for example, descriptions included feelings of anger toward such things as irresponsible co-workers, intrusive or restrictive parents, inconsiderate friends or family members, invasive roommates, unfair academic situations, and thoughtless, cheating, or abusive dating partners. Anxiety descriptions probably were the least variable, because many (but certainly not all) concerned performance in school, on the job, or in sports. Descriptions for happiness included references to graduation, the development of new romantic relationships or being in a satisfying relationship, being with family and friends, overcoming illness, and performing well in school or on other tasks. Sadness descriptions concerned such things as moving away from home, romantic break-ups, disagreements with friends or family members, disagreements or divorce between parents, the loss of pets, seeing or thinking about ill friends or family members, and the passing of friends or family members (or memories of them). Although this brief outline cannot begin to express the richness and detail of many of the descriptions, nor the breath or depth of the emotional situations that were described, it should be noted that virtually all of the descriptions appeared to be very realistic and meaningful regardless of their length, level of detail, or specific topic area.

Analyses for Study 1 are described in a manner parallel to the hypotheses. The strategy for analyzing the data was as follows: first, overall 2 x 2 x 4 Analyses of Variance (ANOVAs) were conducted for each of the dependent variable categories

(intensity, attributions, appropriateness, consensus, and control). In these analyses, participant gender was a between-participants factor, and emotion domain (or attribution type) and emotion type were within-participants factors. Recall that of primary interest in this study were effects due to participant gender, emotion domain, and attribution type, rather than emotion type. As a result, for all of the reported analyses, if any effects for emotion type were found then separate analyses were conducted for each of the four emotions in order to simplify interpretation of the data. In this way, emotion-specific patterns were explored and reported as appropriate. PEQ responses and word counts of the descriptions also were examined in order to gain insight into the manner in which participants approached the experimental task.

Note that, in addition to presentation of the data separately for participant gender and for each of the four emotion types, composite scores also were created for each of the variables. Composite scores were created for each participant by summing the relevant ratings across emotion types and dividing by four to get an average or composite score for each variable; thus, the composite scores are equivalent to ratings collapsed across emotion type. There are composite scores for intensity, appropriateness, consensus and control for feelings and displays, as well as for internal and external attributions. In order to facilitate interpretation of the data, these scores are reported in all tables.

Due to the relatively large number of analyses conducted in this study, an a priori decision was made to adopt a more stringent criterion for evaluating significance. Specifically, all hypotheses were evaluated at $p < .01$ rather than the traditional $p < .05$ level. This more restrictive criterion was chosen with two purposes in mind. First, from a statistical perspective, evaluating each of the effects at this level helped to control the

overall experiment-wise error rate. Second, a stringent level for evaluating significance helped to avoid focussing on effects that were of small magnitude and lacking in practical significance.

Intensity of Experience and Expression

In order to test hypotheses concerning intensity of experience and expression, emotion domain (experience vs. expression) was used as a factor in the analysis. Thus, participants' rated intensity of experience and expression of emotion were compared using a 2 x 2 x 4 Analysis of Variance (ANOVA), with participant gender as a between-participants factor, and emotion domain (experience vs. expression) and emotion type (anger, anxiety, happiness, and sadness) as within-participants factors. Recall that a main effect for emotion domain was expected, such that emotional experiences would be rated as more intense than emotional expressions. A main effect for gender also was expected, such that female participants would rate both their emotional experiences and their emotional expressions as more intense than would male participants.

The descriptive statistics for intensity are shown in Table 1 and are broken down by participant gender (males vs. females) and emotion domain (experience vs. expression, labelled as feeling and display). Note that in order to facilitate interpretation of the data, the table includes means for intensity averaged across the emotions (called composite scores), as well as means collapsed across participant gender (all participants). In addition, means for intensity are reported collapsed across emotion domain (called combined scores) in order to facilitate interpretation of effects collapsed across feelings and displays.

Table 1

Study 1 - Mean Intensity Ratings (and Standard Deviations) as a Function of Participant Gender, Emotion Type and Emotion Domain

	Participant Group					
Emotion	Males		Females		All Participants	
	M	(SD)	*M*	(SD)	*M*	(SD)
Anger						
Feeling	6.28	(1.52)	6.85	(0.99)	6.59	(1.28)
Display	4.50	(2.47)	5.04	(1.98)	4.80	(2.22)
Combined	5.39	(1.57)	5.95	(1.23)	5.69	(1.41)
Anxiety						
Feeling	5.75	(1.69)	6.04	(1.53)	5.91	(1.60)
Display	3.68	(2.06)	4.71	(2.02)	4.24	(2.09)
Combined	4.71	(1.56)	5.38	(1.45)	5.07	(1.53)
Happiness						
Feeling	6.78	(1.27)	7.29	(1.09)	7.06	(1.20)
Display	5.70	(1.99)	6.92	(1.30)	6.36	(1.75)
Combined	6.24	(1.48)	7.10	(1.10)	6.71	(1.35)
Sadness						
Feeling	5.68	(2.15)	6.77	(1.37)	6.27	(1.84)
Display	3.70	(2.52)	5.46	(2.29)	4.66	(2.54)
Combined	4.69	(2.13)	6.12	(1.54)	5.46	(1.95)
Composite						
Feeling	6.12	(0.93)	6.74	(0.70)	6.46	(0.86)
Display	4.39	(1.20)	5.53	(1.19)	5.01	(1.32)
Combined	5.26	(0.92)	6.14	(0.77)	5.74	(0.95)

Note. Higher scores indicate higher intensity ratings.

To begin, a simple visual inspection of the means in Table 1 revealed some interesting observations about the intensity ratings that participants made regarding their own emotions. Specifically, an examination of the composite scores across all participants suggested that, in general, participants reported emotions of relatively high intensity. That is, most of the intensity ratings for experience were close to a value of six or above on a scale that ranged from *0* to *8*. Average ratings for intensity of expression, which appeared to be lower than those for intensity of experience, averaged around the mid-point of the scale (*4*) or above, indicating that they were rated at least as moderate. Ratings of happiness intensity were particularly high. Thus, it would appear that participants chose to report and rate emotions that they considered to be fairly intense rather than mild. Having taken into account this general observation for ratings of intensity, the statistical analyses were performed in order to examine potential differences due to the factors of participant gender, emotion domain, and emotion type.

The 2 x 2 x 4 ANOVA for intensity revealed a main effect for emotion domain, $F(1, 86) = 141.14, p < .001$, indicating that intensity ratings differed for experience as compared to expression of emotion. In accord with the hypotheses, inspection of the means revealed that across participant gender and emotion type, emotional experiences ($M = 6.46$) were rated as more intense than emotional expressions ($M = 5.01$). The partial eta-squared value (η^2), used as an estimate of effect size, revealed this to be an effect of large magnitude ($\eta^2 = .62$).

The 2 x 2 x 4 (Participant Gender x Emotion Domain x Emotion Type) ANOVA for intensity of experience and expression also revealed a main effect for participant gender, $F(1, 86) = 23.73, p < .001$, indicating that males and females differed in their

ratings of emotion intensity. Inspection of the means in Table 1 revealed that, as expected, females overall reported more intense combined feelings and displays of emotion ($M = 6.14$) across the four emotions than did males ($M = 5.26$). Estimates of effect size revealed this to be an effect of small to moderate magnitude ($\eta^2 = .22$). However, although this main effect revealed a gender difference in intensity for combined scores collapsed across emotion domain, it remained important to address the question of whether this effect held individually both for feelings and displays of emotion. Two separate 2 x 2 (Participant Gender x Emotion Type) ANOVAs confirmed that females rated both their experiences, $F(1, 86) = 12.77, p < .001, \eta^2 = .13$, and their expressions of emotion, $F(1, 86) = 12.77, p < .001, \eta^2 = .19$, as more intense than did males ($M's = 6.74$ vs. 6.12 for feelings, and 5.53 vs. 4.39 for displays).

The 2 x 2 x 4 (Participant Gender x Emotion Domain x Emotion Type) ANOVA also revealed a main effect for emotion type, $F(3, 258) = 20.14, p < .001$, indicating that ratings of intensity differed across the four emotions ($\eta^2 = .19$). Pairwise comparisons with a Bonferroni correction revealed that the emotion of happiness differed significantly from all of the other emotions ($p < .001$ in each case). As shown in Table 1, overall combined means for each emotion were as follows: for happiness, $M = 6.71$; for anger, $M = 5.69$; for anxiety, $M = 5.07$; and for sadness, $M = 5.46$. This result confirms the observation that ratings of happiness intensity appeared to be particularly high. In addition to this main effect, however, the 2 x 2 x 4 ANOVA also revealed a significant interaction between emotion domain and emotion type, $F(3, 258) = 6.30, p < .001$. Although this interaction effect was of small magnitude ($\eta^2 = .07$), it nonetheless indicated that there may be differing patterns across the four emotion types. In order to

explore the nature of this interaction effect, separate analyses were performed on intensity ratings for each of the four emotions.

Four 2 x 2 (Participant Gender x Emotion Domain) ANOVAs for intensity of emotion feelings and displays were conducted for each of the four emotion types. These analyses revealed the expected main effect for emotion domain for all four emotions: anger, $F(1, 86) = 53.63, p < .001$; anxiety, $F(1, 86) = 57.45, p < .001$; happiness, $F(1, 86) = 28.17, p < .001$; and sadness, $F(1, 86) = 54.04, p < .001$. The magnitude of this effect was substantial in each case ($\eta^2 = .38$ for anger, $\eta^2 = .40$ for anxiety, $\eta^2 = .25$ for happiness, and $\eta^2 = .39$ for sadness). Inspection of the means revealed that, across all participants for each emotion, feelings were rated as more intense than displays (see Table 1).

The series of 2 x 2 (Participant Gender x Emotion Domain) ANOVAs further revealed a significant main effect for participant gender for only two of the four emotions: happiness, $F(1, 86) = 9.96, p < .002, \eta^2 = .10$, and sadness, $F(1, 86) = 13.27, p < .001, \eta^2 = .13$. These results indicated that male and female participants differed in their ratings of happiness and sadness intensity such that females rated their combined feelings and displays of happiness and of sadness as more intense than did males (for happiness, *M's* = 7.10 vs. 6.24, and for sadness, *M's* = 6.12 vs. 4.69). Although the gender effect held only for happiness and sadness when the emotions were analyzed separately, further examination of the values in Table 1 revealed that the means were in a

consistent direction across all of the emotions.[2] In addition, the effect size for the main effect for gender from the larger ANOVA was more substantial ($\eta^2 = .22$), suggesting that, overall, female participants rated both their experiences and expressions of emotion as at least slightly more intense than did male participants.

The only other significant result to emerge from the ANOVAs concerned the emotion of happiness. Specifically, for happiness, the main effects for participant gender and emotion domain were qualified by a significant interaction between participant gender and emotion domain, $F\,(1, 86) = 6.57, p < .012$. Follow-up paired comparisons revealed that, whereas females rated their expressions of happiness as significantly more intense than did males (*M's* = 6.92 vs. 5.70), $t\,(86) = 3.45, p < .001$, the difference for experience was not significant at the more stringent critical level (*M's* = 7.29 vs. 6.78), $t\,(86) = 2.05, p < .043$. Further visual inspection of the means in Table 1 revealed that this trend also occurred to some extent for the emotions of anxiety and sadness. That is, the difference between males' and females' ratings of intensity was greater for expression than for experience for each emotion except anger. Thus, even though females rated both their experiences and expressions of emotion as at least slightly more intense than did males (as revealed by the main effects for participant gender), this was especially the case for expressions. These observations help to account for the interaction between emotion domain and emotion type found in the larger ANOVA.

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[2] The effects for anger and anxiety would have been significant or marginally significant at the traditional $p < .05$ level: for anger, $F\,(1, 86) = 3.54$, $p < .063$, $\eta^2 = .04$, and for anxiety, $F\,(1, 86) = 4.24$, $p < .042$, $\eta^2 = .05$. In each case, females rated both their experiences and expressions of emotion as at least slightly more intense than did males (see Table 1). These effects are in the same direction as those for happiness and sadness.

Locus of Causality

In order to test hypotheses concerning locus of causality, attribution type was used as a factor in a 2 x 2 x 4 (Participant Gender x Attribution Type: External, Internal x Emotion Type) ANOVA. Participant gender was a between-participants factor, while attribution type and emotion type were within-participants factors. A main effect for attribution type was expected, such that external events would be rated as contributing more to emotions than internal factors. The extent to which attribution ratings varied across participant gender was explored.

The means for attributions are shown in Table 2, and are broken down by participant gender and attribution type (external vs. internal). Note that, in order to facilitate interpretation of statistical tests, the table includes means for attributions averaged across the emotions (called composite scores), as well as means collapsed across participant gender (all participants).

Table 2

Study 1 - Mean Attribution Ratings (and Standard Deviations) as a Function of Participant Gender, Emotion Type, and Attribution Type

	Participant Group					
Emotion	Males		Females		All Participants	
	M	(SD)	*M*	(SD)	*M*	(SD)
Anger						
External	6.83	(1.45)	6.60	(2.04)	6.70	(1.79)
Internal	3.48	(2.12)	3.50	(2.90)	3.49	(2.56)
Anxiety						
External	5.78	(2.21)	5.21	(2.74)	5.47	(2.51)
Internal	4.30	(2.33)	4.79	(2.67)	4.57	(2.52)
Happiness						
External	6.78	(1.59)	6.92	(1.76)	6.85	(1.68)
Internal	4.55	(2.49)	5.60	(2.41)	5.13	(2.49)
Sadness						
External	6.58	(2.00)	6.90	(1.92)	6.75	(1.95)
Internal	2.85	(2.80)	3.73	(2.76)	3.33	(2.79)
Composite						
External	6.49	(0.94)	6.41	(1.16)	6.44	(1.06)
Internal	3.79	(1.53)	4.41	(1.75)	4.13	(1.67)

Note. Higher scores indicate higher attribution ratings.

To begin, visual inspection of the means in Table 2 revealed some interesting observations about the nature of the attribution ratings made by participants in Study 1. Specifically, the mean values suggested that attributions to external causes were quite high for both male and female participants across all emotion types. That is, external attribution ratings ranged between five and seven on the *0* to *8* attribution scales. Attributions to internal factors, on the other hand, appeared to be lower than attributions to external factors, although these for the most part could best be characterized as moderate. That is, most of the internal attribution ratings varied closely around the mid-point value (*4*) on the *0* to *8* scales, indicating that internal attributions most generally could be described as moderate. Internal attributions for happiness appeared to be particularly high. Thus, although external attributions for emotions appeared to exceed internal attributions, participants clearly took into account both internal and external causes when rating their own emotions. With these observations in mind, the statistical analyses were conducted in order to examine effects due to participant gender, attribution type, and emotion type.

The 2 x 2 x 4 (Participant Gender x Attribution Type x Emotion Type) ANOVA for attribution ratings revealed a main effect for attribution type, $F(1, 86) = 114.45, p < .001$, indicating that participants differed in their ratings of internal as compared to external attributions for their emotions. In accord with the hypotheses, emotions overall were attributed to external factors ($M = 6.44$) to a greater extent than internal factors ($M = 4.13$). Estimates of effect size revealed this to be an effect of large magnitude ($\eta^2 = .57$).

The 2 x 2 x 4 ANOVA also revealed a main effect for emotion type, $F(3, 258) = 8.04, p < .001$ ($\eta^2 = .09$), suggesting that there were differences in overall attribution

ratings across the four emotions. Both of the main effects were, however, qualified by a significant interaction between attribution type and emotion type, F (3, 258) = 13.70, $p <$ .001 ($\eta^2 = .14$). Thus, in order to further explore the nature of the reported attributions, analyses were performed separately for each of the four emotions.

Four 2 x 2 (Participant Gender x Attribution Type) ANOVAs for attributions were conducted for each of the four emotion types. This series of ANOVAs revealed the expected main effect for attribution type for all four emotions: anger, F (1, 86) = 85.37, p < .001; anxiety, F (1, 86) = 6.14, p < .015; happiness, F (1, 86) = 30.84, p < .001; and sadness, F (1, 86) = 87.49, p < .001. The magnitude of this effect was moderate to large in each case with the exception of anxiety ($\eta^2 = .50$ for anger, $\eta^2 = .07$ for anxiety, $\eta^2 =$ .26 for happiness, and $\eta^2 = .50$ for sadness). Inspection of the means revealed that, for each emotion, attributions to external factors were greater than attributions to internal factors (see Table 2). No other significant effects were found; however, the interaction between attribution type and emotion type found in the larger 2 x 2 x 4 ANOVA appears to be due to the fact that the main effect for attribution type was of smaller magnitude for anxiety than for any of the other three emotions.

Appropriateness

In order to assess appropriateness, or the perceived match between the emotional trigger and the emotional response, participants were asked to indicate the extent to which both their experience and expression of an emotion fit the situation as compared to being an under- or over-reaction. These ratings were made on scales that ranged from *-4* (extreme under-reaction) to *+4* (extreme over-reaction), with the *0* mid-point of the scale representing "appropriate reaction." Again emotion domain was included in the 2 x 2 x 4

analysis, with participant gender as a between-participants factor, and emotion domain and emotion type as within-participant factors. The basic prediction was that participants overall would rate their experiences and expressions as appropriate. However, as for the other analyses, there also was the question of whether appropriateness ratings would differ across groups. Thus, appropriateness ratings were examined using a two-stage analysis. First, a series of one-sample t-tests were conducted separately for males' and females' appropriateness ratings in order to determine whether they differed from the zero or "appropriate" point of the scale. Second, a 2 x 2 x 4 (Participant Gender x Emotion Domain x Emotion Type) ANOVA was conducted on mean appropriateness ratings in order to examine any effects due to these factors. The means for appropriateness are shown in Table 3. Again, to facilitate interpretation of the data, the table includes both composite scores (averaged across emotion) as well as scores for all participants collapsed across gender.

Table 3

Study 1 - Mean Appropriateness Ratings (and Standard Deviations) as a Function of Participant Gender, Emotion Type, and Emotion Domain

	Participant Group					
Emotion	Males		Females		All Participants	
	M	(SD)	*M*	(SD)	*M*	(SD)
Anger						
Feeling	1.30	(1.24)	0.50	(1.09)	0.86	(1.22)
Display	0.73	(1.80)	0.29	(1.35)	0.49	(1.58)
Anxiety						
Feeling	0.83	(1.36)	1.04	(1.27)	0.94	(1.31)
Display	-0.15	(1.73)	0.63	(1.52)	0.27	(1.66)
Happiness						
Feeling	0.40	(0.96)	0.44	(1.25)	0.42	(1.12)
Display	0.48	(1.45)	0.23	(1.12)	0.34	(1.28)
Sadness						
Feeling	0.28	(1.41)	0.38	(1.06)	0.33	(1.23)
Display	-0.23	(1.46)	0.10	(1.22)	-0.05	(1.34)
Composite						
Feeling	0.70	(0.65)	0.59	(0.66)	0.64	(0.66)
Display	0.21	(0.72)	0.31	(0.76)	0.26	(0.74)

Note. Appropriateness ratings were made using scales that ranged from *extreme under-reaction* (-4), through *appropriate reaction* (0), to *extreme over-reaction* (+4). Thus, negative scores indicate ratings of under-reactions, positive scores indicate ratings of over-reactions, and scores close to zero indicate ratings of appropriate reactions.

First of all, inspection of the means in Table 3 revealed quite clearly that average responses to the appropriateness questions were not extreme; that is, responses ranged between approximately *-1* and *+1* on the scales, indicating that feelings and displays were rated between slight under-reactions and slight-over-reactions. Note that most of the means are positive, indicating that, for the most part, feelings and displays were rated toward the "slight over-reaction" point on the scale. However, many of the means actually are closest to zero, which is the "appropriate reaction" point on the scale. The two most extreme ratings were for males' feelings of anger ($M = 1.30$) and females' feelings of anxiety ($M = 1.04$), which were rated as slight over-reactions. Given that most of the means are close in value and range between the same narrow points on the scale, any differences found in the analyses are interpreted cautiously as relative differences.

Prior to the ANOVA, a series of 4 one-sample t-tests was conducted on males' and females' appropriateness ratings for feelings and displays collapsed across emotion type; that is, the t-tests were performed on males' and females' composite scores. This analysis revealed that both males' ($M = 0.70$) and females' ($M = 0.59$) ratings for appropriateness of feelings differed from zero such that all participants tended to rate their feelings toward the slight over-reaction point of the scale ($t\ (39) = 6.80, p < .001$, and $t\ (47) = 6.17, p < .001$, respectively). Inspection of the means in Table 3 revealed that this effect was the most apparent for the emotions of anger and anxiety. In addition, females' ratings for appropriateness of displays ($M = 0.31$) also differed significantly from zero, $t\ (47) = 2.87, p < .006$; however, given that this mean actually is closer to the zero or "appropriate" point on the scale than the "slight over-reaction" point on the scale, this result must be interpreted with caution.

Following the analysis of composite scores, a 2 x 2 x 4 (Participant Gender x Emotion Domain x Emotion Type) ANOVA for ratings of appropriateness was conducted in order to examine possible effects due to these factors. This analysis revealed a main effect for emotion domain $F(1, 86) = 26.34, p < .001$, indicating that experiences and expressions of emotion were rated differently in terms of appropriateness. Inspection of the means in Table 3 revealed that feelings were rated relatively more toward the slight over-reaction point of the scale ($M = 0.64$) than were displays of emotion ($M = 0.26$). This was an effect approaching moderate magnitude ($\eta^2 = .23$).

A main effect for emotion type also was found, $F(3, 258) = 4.04, p < .008$, indicating that ratings of appropriateness differed across the four emotions. However, this effect was qualified by a significant interaction between emotion domain and emotion type, $F(3, 258) = 3.66, p < .013$. A significant interaction between participant gender and emotion type also was found, $F(3, 258) = 3.67, p < .013$. Although these interaction effects were of small magnitude ($\eta^2 = .05$ for both), they nevertheless indicated possible differing patterns across the four emotions and, as a result, appropriateness ratings were further explored by conducting separate analyses for each of the four emotions.

Four 2 x 2 (Participant Gender x Emotion Domain) ANOVAs for appropriateness of emotion feelings and displays were conducted for each of the four emotion types. This series of ANOVAs revealed a main effect for emotion domain for three of the four emotions: anger, $F(1, 86) = 8.13, p < .005$; anxiety, $F(1, 86) = 18.48, p < .001$; and sadness, $F(1, 86) = 7.36, p < .008$. The effect was not significant for the emotion of happiness, and this could help to account for the interaction between emotion domain and emotion type that was found in the larger ANOVA reported earlier. With regard to the

main effects for emotion domain, inspection of the means revealed that for each of the emotions (with the exception of happiness), feelings were rated more toward the slight over-reaction point on the scale than were displays of emotion (see Table 3). The magnitude of the significant effects were, however, relatively small ($\eta^2 = .09$ for anger, $\eta^2 = .18$ for anxiety, and $\eta^2 = .08$ for sadness).

In addition to the effects for emotion type, there was one unique effect found in the series of ANOVAs which was specific to the emotion of anger. That is, the 2 x 2 ANOVA for anger revealed a marginally significant main effect for participant gender, $F(1, 86) = 5.54, p < .021$, indicating that males and females differed in their ratings of anger appropriateness. Although this was an effect of small magnitude ($\eta^2 = .07$), inspection of the means revealed that males rated their combined experiences and expressions of anger ($M = 1.02$) as greater over-reactions than did females ($M = 0.40$).[3] This finding helps to account for the interaction between participant gender and emotion type found in the larger 2 x 2 x 4 ANOVA.

Consensus

The two consensus questions asked about the extent to which participants thought that others would experience and express less, more, or the same amount of emotion in the circumstances described. These questions were rated on scales that ranged from *-4* (most others would feel or display very much *less* emotion) to *+4* (most others would feel or display very much *more* emotion), with the *0* mid-point of the scale indicating that most others would be expected to feel or show the *same* amount of emotion. The

[3] These combined means (collapsed across emotion domain) are not shown in Table 3.

approach to the analysis for consensus ratings was the same as that for ratings of appropriateness. That is, one-sample t-tests were conducted first for males' and females' ratings of consensus to determine if they differed from the zero point of the scale which denoted the perception that "most people would feel/show the same amount of emotion." Then a 2 x 2 x 4 ANOVA was conducted with participant gender as a between-participants factor, and emotion domain and emotion type as within-participants factors. The means for consensus are listed in Table 4. Again, the table includes composite scores as well as scores for all participants collapsed across gender.

Table 4

Study 1 - Mean Consensus Ratings (and Standard Deviations) as a Function of Participant Gender, Emotion Type, and Emotion Domain

	Participant Group					
Emotion	Males		Females		All Participants	
	M	(SD)	*M*	(SD)	*M*	(SD)
Anger						
Feeling	-0.13	(1.79)	0.04	(1.13)	-0.03	(1.46)
Display	0.08	(1.82)	0.10	(1.42)	0.09	(1.60)
Anxiety						
Feeling	-0.10	(1.65)	-0.10	(1.22)	-0.10	(1.42)
Display	0.25	(1.71)	-0.33	(1.58)	-0.07	(1.65)
Happiness						
Feeling	-0.13	(1.22)	-0.27	(0.82)	-0.20	(1.02)
Display	0.30	(1.47)	-0.19	(0.89)	0.03	(1.21)
Sadness						
Feeling	-0.08	(1.61)	-0.31	(1.03)	-0.20	(1.32)
Display	0.45	(1.62)	0.10	(1.36)	0.26	(1.48)
Composite						
Feeling	-0.11	(1.00)	-0.16	(0.54)	-0.14	(0.78)
Display	0.27	(0.90)	-0.08	(0.75)	0.08	(0.83)

Note. Consensus ratings were made using scales that ranged from "most others would feel (or display) very much *less* emotion" (-4), through "most others would feel (or display) the *same* amount of emotion" (0), to "most others would feel (or display) very much *more* emotion" (+4). Thus, both negative and positive scores indicate ratings of low consensus, with others being estimated as experiencing more or less of the emotion. In contrast, scores near zero indicate ratings of high consensus.

Inspection of the means in Table 4 revealed some interesting observations about the consensus ratings. Specifically, careful consideration of the mean scores revealed that all of the ratings were very close to the middle of the scale, with none of the means reaching even one-half of a point above or below the zero mid-point of the scale. This suggests that participants for the most part expected others to both feel and show the same amount of emotion as they themselves did. Confirming this observation, a series of 4 one-sample t-tests on males' and females' composite consensus ratings for feelings and displays revealed that none of the ratings differed significantly from zero. Overall, then, neither males nor females thought that others would experience or express substantially more or less emotion than they themselves did across the four emotions.

The 2 x 2 x 4 (Participant Gender x Emotion Domain x Emotion Type) ANOVA for consensus revealed only a main effect for emotion domain, $F(1, 86) = 12.25, p < .001$, indicating that consensus ratings differed for experience as compared to expression of emotions ($\eta^2 = .13$). However, the difference between overall composite ratings of consensus for feelings ($M = -0.14$) and consensus for displays ($M = 0.08$) was so small as to be of no practical importance. No other significant effects were found for consensus ratings.

Control

With regard to control over emotional experience and expression, it was predicted that participants would report feeling greater control over the expression of their emotions than over the experience of their emotions. This hypothesis was tested using the same type of 2 x 2 x 4 (Gender x Emotion Domain x Emotion Type) ANOVA that was used in previously-described analyses. A main effect for emotion domain was expected

such that control would be rated as higher for expression than for experience of emotion. Of interest also was the extent to which perceptions of control might differ among male and female participants, although no formal predictions were advanced. The descriptive statistics for control are shown in Table 5. Note that in addition to composite scores averaged across all emotions and scores averaged across all participants, means for control also are reported collapsed across emotion domain (called combined scores) in order to facilitate interpretation of effects collapsed across feelings and displays.

Table 5

Study 1 - Mean Control Ratings (and Standard Deviations) as a Function of Participant Gender, Emotion Type, and Emotion Domain

	Participant Group					
Emotion	Males		Females		All Participants	
	M	(SD)	*M*	(SD)	*M*	(SD)
Anger						
Feeling	4.93	(2.40)	5.10	(2.25)	5.02	(2.31)
Display	5.15	(2.64)	5.40	(2.00)	5.28	(2.30)
Combined	5.04	(2.25)	5.25	(1.88)	5.15	(2.05)
Anxiety						
Feeling	4.18	(2.04)	3.58	(2.34)	3.85	(2.22)
Display	5.25	(2.12)	4.42	(2.39)	4.80	(2.30)
Combined	4.71	(1.87)	4.00	(2.12)	4.32	(2.03)
Happiness						
Feeling	5.33	(2.34)	5.40	(2.57)	5.36	(2.46)
Display	5.68	(2.07)	5.60	(2.62)	5.64	(2.37)
Combined	5.50	(1.84)	5.50	(2.39)	5.50	(2.15)
Sadness						
Feeling	4.30	(2.57)	4.02	(2.75)	4.15	(2.66)
Display	5.63	(2.25)	4.06	(2.53)	4.77	(2.52)
Combined	4.96	(2.14)	4.04	(2.38)	4.46	(2.31)
Composite						
Feeling	4.68	(1.49)	4.53	(1.55)	4.60	(1.52)
Display	5.43	(1.22)	4.87	(1.39)	5.12	(1.34)
Combined	5.05	(1.15)	4.70	(1.37)	4.86	(1.28)

Note. Higher ratings indicate greater perceptions of control.

Mean ratings were examined first in order to obtain some general impressions about the nature of the control ratings. Inspection of the means in Table 5 revealed that, with only one exception (females' ratings of control for anxiety feelings), all of the control ratings ranged between four and six on the *0* to *8* scales. These ratings suggest that participants perceived their feelings of control over emotional experiences and expressions to be at least moderate or above moderate. Thus, it appears that participants felt neither very little nor very much control over their emotions, but rather perceived control as at least moderate. With this observation in mind, the statistical analyses were conducted in order to examine the nature of any potential differences due to participant gender, emotion domain, and emotion type.

The 2 x 2 x 4 (Participant Gender x Emotion Domain x Emotion Type) ANOVA for control revealed a main effect for emotion domain, $F(1, 86) = 15.96, p < .001$, indicating that ratings of control over feelings differed from ratings of control over displays of emotion ($\eta^2 = .16$). Inspection of the means in Table 5 revealed that, overall, as expected, participants rated their displays of emotion ($M = 5.12$) as at least slightly more controllable than their feelings (M = 4.60).

The only other effect revealed by the ANOVA was a main effect for emotion type, $F(3, 258) = 6.55, p < .001$, indicating that ratings of control varied across the four emotion types ($\eta^2 = .07$). Pairwise comparisons with a Bonferroni correction revealed that combined control ratings for all participants for the emotions of anxiety ($M = 4.32$) and sadness ($M = 4.46$) differed from those of happiness ($M = 5.50$), $p < .006$. Thus, overall, participants perceived themselves as having less control over their feelings and displays of anxiety and sadness than over their feelings and displays of happiness. Note

that these greater control ratings for happiness occurred even though happiness was rated as the most intensely experienced and expressed emotion.

Given the importance of control as a theoretical variable, separate analyses were conducted for each emotion in order to further explore the nature of control ratings; thus, four 2 x 2 (Participant Gender x Emotion Domain) ANOVAs were conducted for control over feelings and displays for each of the four emotion types. These ANOVAs revealed a significant main effect for emotion domain for only two of the four emotions: anxiety, F (1, 86) = 20.37, $p < .001$ ($\eta^2 = .19$), and sadness, F (1, 86) = 7.92, $p < .006$ ($\eta^2 = .08$). These findings indicated that participants rated control over feelings of anxiety and sadness as different from control over displays of anxiety and sadness. Inspection of the means for anxiety revealed that participants reported more control over their displays of anxiety ($M = 4.80$) than over their feelings of anxiety ($M = 3.85$). The effect for sadness, however, was qualified by a significant interaction between participant gender and emotion domain, F (1, 86) = 6.98, $p < .01$. Inspection of the means in Table 5 and follow-up comparisons revealed that whereas males and females did not differ in their ratings of control over feelings of sadness ($M's = 4.30$ vs. 4.02, t (86) = .49, n.s.), males rated their displays of sadness as more controllable than did females ($M's = 5.63$ vs. 4.06, t (86) = 3.03, $p < .003$). The ANOVAs for anger and happiness revealed no significant effects for control; thus, the emotion domain effect applied only inconsistently to the emotions of anxiety and sadness.

PEQ Responses

After completing questionnaires for each of the four emotion types, participants in Study 1 responded to an extensive PEQ (see Appendix C). The purpose of the PEQ was

to gain insight into the manner in which participants approached the experimental task as well as to estimate the extent to which they had difficulties responding to items on the emotion questionnaires. The first item on the PEQ asked participants if they had any difficulty recalling any particular emotions that they were asked about in the study. In total, 34 participants (38.6%) indicated that they did have some difficulty with this task. More specifically, 15 male and 19 female participants reported having difficulty recalling one or more emotions. The second part of this question asked which particular emotions were difficult to recall, and participants were asked to indicate all of which applied. In response to this item, 11 participants reported having difficulty recalling the emotion of anger, 17 had difficulty recalling anxiety, 8 had difficulty recalling happiness, and 12 had difficulty recalling sadness. These responses were approximately equal across male and female participants.

The second item on the PEQ asked participants if they had any difficulty describing their emotions in words. For this item, 51 participants (58.0%), including 23 males and 28 females, indicated that they did have difficulty with the descriptions. When asked what was difficult about the task, 14 participants indicated that it was because "emotions are very private, difficult to talk about," and 46 indicated that it was because "it's just hard to put those kinds of feelings into words." Two participants chose "other" and supplied their own response.

The third item on the PEQ asked participants if they had any difficulty answering the rating scale questions about their emotions. For this item, 24 participants (27.3%), including 9 males and 15 females, indicated that they did have difficulty with rating scale items. Unfortunately, space was not provided on the questionnaire for participants to

indicate specifically what it was that they had difficulties with.

The fourth item on the PEQ focussed on the fact that the same types of questions were asked with regard to expression of emotion as they were for experience of emotion. In other words, participants had to respond to the same questions twice for each emotion, once for feeling and once for display. Thus, participants were asked on the PEQ if they were able to separate their thinking about how they felt the emotion from their thinking about how they showed the emotion. For this item, 78 participants (88.6%) indicated that they believed that they indeed were able separate their thinking about how they felt from how they showed emotion. Thus, only 10 participants (11.4%), including 6 males and 4 females, indicated that they had difficulty with this task.

A related demand characteristics item was designed to assess whether participants had any particular manner of responding when they were asked the same questions twice for each emotion. For this item, 1 participant (1.1%) indicated that he thought he should respond the "same" to both sets of questions, 16 participants (18.2%) indicated that they thought they should respond "differently" to both sets of questions, and 69 participants (78.4%) indicated that they didn't really think about how they were supposed to respond, they "just answered the questions." Thus, approximately 78% of participants reported having no identifiable biases when answering the two sets of questions. And, although 18% of the participants reported thinking that they were supposed to respond differently to each set of questions, it seemed possible in hindsight that these participants were responding to the Introduction instructions which provided a forewarning about the dual focus on experience and expression and the necessity of reading questions carefully to know what was being asked (see Appendix B). In other words, it is possible that these

participants interpreted this PEQ item as referring to the requirement to focus separately on experience as compared to expression, rather than as referring to purposely answering the questions differently for experience and expression.

The final item on the PEQ gave participants the opportunity to list any questions or comments that they had about the study. Only 4 participants (4.5%) wrote anything in response to this item; however, these responses did not reveal anything about how participants approached the experimental task. It should be noted at this point that observations by the experimenter during the experimental sessions suggested strongly that participants responded to the emotion questionnaires both thoughtfully and carefully, and that few participants appeared to have obvious difficulty completing the task. In addition, the very detailed and personal nature of most of the emotion descriptions also suggests that participants were able to approach the task in a meaningful, non-trivial way.

Word Counts

Given the expectation of gender differences in ratings of emotion, it seemed possible that in addition to rating their emotions differently, male and female participants also might provide written descriptions of emotion that differed in identifiable ways. Specifically, it was reasoned that if females are more emotional in some way, or more open about their emotions, or more comfortable with expressing their emotions, then they may be more willing to share those emotions in the form of detailed written descriptions. It also could be argued that this same outcome could result from the nature of females as more verbal. As a result, the number of words used to describe emotion triggers and emotion displays were tallied and compared between male and female participants. The mean word counts are shown in Table 6, and included in the table are word counts

collapsed across emotion domain in order to facilitate interpretation of findings across feelings and displays of emotion.

Table 6

Study 1 - Mean Word Counts (and Standard Deviations) as a Function of Participant Gender, Emotion Type, and Emotion Domain

	Participant Group					
Emotion	Males		Females		All Participants	
	M	(SD)	*M*	(SD)	*M*	(SD)
Anger						
Trigger	67.02	(32.97)	77.21	(33.61)	72.58	(33.52)
Display	34.78	(19.44)	51.25	(25.14)	43.76	(24.06)
Combined	50.90	(22.29)	64.23	(26.04)	58.17	(25.17)
Anxiety						
Trigger	67.20	(29.80)	71.77	(29.52)	69.69	(29.56)
Display	33.67	(17.70)	42.58	(17.04)	38.53	(17.81)
Combined	50.44	(17.57)	57.18	(20.94)	54.11	(19.67)
Happiness						
Trigger	58.93	(26.65)	63.98	(29.49)	61.68	(28.19)
Display	35.53	(15.81)	39.65	(19.64)	37.77	(18.02)
Combined	47.23	(18.14)	51.81	(22.54)	49.73	(20.67)
Sadness						
Trigger	58.85	(26.01)	69.27	(27.42)	64.53	(27.18)
Display	33.18	(16.35)	47.56	(21.46)	41.02	(20.51)
Combined	46.01	(17.22)	58.42	(21.46)	52.78	(20.50)
Composite						
Trigger	63.00	(21.10)	70.56	(23.11)	67.12	(22.41)
Display	34.29	(12.87)	45.26	(15.98)	40.27	(15.57)
Combined	48.64	(14.30)	57.91	(18.34)	53.70	(17.17)

In order to explore possible gender differences in word counts, a 2 x 2 x 4 (Participant Gender x Emotion Domain x Emotion Type) ANOVA was conducted on these values. First of all, the ANOVA revealed a significant main effect for emotion domain, $F(1, 86) = 84.89, p < .001, \eta^2 = .50$, indicating that word counts differed for descriptions of triggers as compared to descriptions of displays of emotion. Not surprisingly, participants used more words to describe triggers ($M = 67.12$) than they did to describe displays ($M = 40.27$).

The ANOVA also revealed a significant main effect for participant gender, $F(1, 86) = 6.51, p < .013, \eta^2 = .07$, indicating that male and female participants differed in the number of words they used in their descriptions of emotion. Inspection of the means revealed that female participants used greater numbers of words to describe their emotions collapsed across feelings and displays ($M = 57.91$) than did males ($M = 48.64$). Inspection of the means revealed that the actual differences in number of words used were larger for descriptions of displays than descriptions of triggers. The composite scores, for example, revealed that female participants used, on average, approximately seven words more than male participants used to describe emotion triggers, and approximately 11 words more than males used to describe displays of emotion. In other words, females used, on average, 11% more words to describe emotions triggers, and 33% more words to describe displays of emotion.

Discussion

The results from Study 1 provided a good deal of insight into the question of how individuals perceive their own emotions in terms of intensity, attributions, appropriateness, consensus, and control. For intensity, results were in accord with

research on hidden affect or the secret self (e.g., Johnson, 1987; Johnson et al., 1988; Struthers & Johnson, 1991) which suggests that people tend to believe that they feel more emotion inwardly than they show outwardly. In Study 1, participants rated their feelings of emotion as more intense than their displays of emotion, and this was an effect of large magnitude. In addition, analyses of the consensus data revealed that participants thought that others would experience and express approximately the same amount of emotion as they themselves did given the same circumstances, and this result suggests that individuals also believe that others similarly would feel more emotion than they would show outwardly. Thus, it would appear that distinguishing between experience and expression of emotion is critical when considering intensity of the emotional response. Inspection of the mean ratings for intensity also revealed that both feelings and displays of emotion were rated relatively high, indicating that participants chose to report and rate emotions that were fairly intense as compared to mild. Specifically, ratings of feeling intensity averaged around six on the *0* to *8* scales, and ratings of display intensity averaged around the mid-point of the scales. Feelings and displays of happiness were rated as most intense. Most of the emotions, therefore, probably were meaningful and important to participants.

Analysis of the intensity data also revealed the expected main effect for participant gender which indicated that, in accord with hypotheses, females reported more intense experience and expression of emotion than did males. However, although this gender effect was significant for the emotions as a composite, the effect held only for the emotions of happiness and sadness when each emotion was analyzed separately. This pattern of results suggests that, according to self-reports, females are both happier and

sadder than males. However, the results for happiness revealed that this effect held more for expressions than for experiences of emotion, and the pattern was the same for sadness. These findings indicate that males and females differed particularly in their ratings of expression of emotion. That is, although females rated both their feelings and displays of emotion as at least slightly more intense than did males, this was especially the case for displays. Overall, then, the results of Study 1 are most consistent with the assertions of Kring and Gordon (1998) who argue that, although some research has indicated that women tend to report experiencing more intense emotions than men, the evidence suggesting that women display their emotions more than men is even more persuasive. Thus, self-reported gender differences in emotion may occur more for specific emotions such as happiness and sadness, and especially for the domain of expression. The lack of gender effect for the emotion of anger is in accord with other research which has found no self-reported differences between men's and women's anger (e.g., Averill, 1982; Grossman & Wood, 1993), despite the stereotypical association of anger with men.

With regard to attributions, analyses confirmed and extended the results of previous attribution studies which have suggested that emotions generally are attributed to external factors to a greater extent than internal factors. For each of the four emotion types, participants rated their emotions as attributable to external factors more than internal factors. This effect was of large magnitude for all of the emotions with the exception of anxiety. Nonetheless, it would appear that, in general, external attributions are favoured for explanations of emotions. This finding, of course, is in accord with attribution studies in many areas which suggest that we frequently make external

attributions for our own behaviours (Jones & Nisbett, 1971; Frank & Gilovich, 1989). Attribution ratings did not differ among male and female participants.

Of interest with regard to the attribution ratings is the fact that the present research differs from many prior studies which addressed attributions for emotion because participants in this study were asked about specific, real experienced emotions rather than imagined or hypothetical emotions. The same conclusions that may be drawn from all of these types of studies suggest that the tendency to attribute emotions to external factors is a consistent and robust effect. It should be noted, however, that although internal attributions were rated significantly lower than external attributions, ratings of the contribution of internal factors could best be described as moderate rather than low. This suggests that although external attributions may have been favoured when explaining emotions, internal causes still were being taken into account. For future research, it would be most interesting to delineate the circumstances in which internal attributions for emotion might meet or exceed external attributions.

Analysis of the appropriateness data revealed that, across emotion type, both males and females had a tendency to rate their emotional experiences as slight over-reactions. It should be noted, however, that the mean scores for experience were between the "appropriate" and "slight over-reaction" points on the scale, so it must be stressed that any perceptions of feelings as over-reactions were only slight. Emotional displays, on the other hand, were rated simply as appropriate.[4] It is interesting that males rated their emotional experiences as over-reactions to the same extent as females given that their

[4] Although females' ratings for displays were found to differ significantly from zero, the mean ($M = .31$) was still closer to the "appropriate" point of the scale.

ratings of intensity were lower than those of females. Results also indicated that participants rated their feelings as slightly greater over-reactions than their displays of emotion; however, the difference between the means was not large and this result is interpreted with caution.

The one unique effect to emerge from the analysis of appropriateness ratings concerned the emotion of anger, with results indicating that males rated their feelings and displays of anger as greater over-reactions than did females. Although this was an effect of small magnitude, it is of theoretical interest because anger is the only emotion that is stereotypically associated with men. In addition, recall that females rated their feelings and displays of anger as slightly (but not significantly) more intense than did males.

The results for consensus supported the most straight-forward hypothesis with regard to social comparison of emotion. That is, participants generally estimated that others would both feel and display the same amount of emotion that they themselves did. No effects due to participant gender were found for consensus items. In addition, no support was found for the idea that participants would consider consensus differently for positive versus negative emotions, despite evidence from other studies which suggests that people tend to perceive consensus for their negative and neutral traits and opinions, whereas they tend to perceive uniqueness for their more positive qualities (Goethals, 1986; Goethals et al. 1991). Similarly, research specific to perceived consensus for emotions has suggested that individuals tend to perceive themselves as experiencing both positive and negative emotions with greater intensity than other people, but showing only positive emotions more than others (Johnson, 1987; Johnson et al., 1988; McFarland & Miller, 1990). Again, however, the distinguishing feature of the present study is the focus

on real, experienced emotions, and this could help to account for differing results as compared to studies in which hypothetical or imagined emotions were used as stimuli.

The results for perceived control over feelings and displays of emotion provided only weak support for the hypothesis that participants would report feeling greater control over the expression of their emotions than over the experience of their emotions. Specifically, although the larger ANOVA revealed a significant main effect for emotion domain, separate analyses for each emotion type revealed that the effect held only for the emotions of anxiety and sadness. For anxiety, participants rated their expressions as more controllable than their experiences of emotion. The effect for sadness, however, was qualified by an interaction with participant gender, such that males rated their displays of sadness as more controllable than did females. Thus, the results for control revealed no consistent effects. Importantly, however, inspection of the mean values for control indicated that all were near or above the mid-point of the scale, suggesting that, overall, participants felt at least moderate levels of control over their feelings and displays of emotion.

The PEQ responses also proved quite informative in Study 1. Specifically, it was found that 39% of participants had difficulty recalling one or more emotions during the course of the study. This fact is somewhat surprising given the fairly wide latitude of time that participants could consider (the past couple of months), as well as the research which suggests that people experience, on average, at least one episode of consciously recognized emotion per day (Oatley & Duncan, 1994). Regardless, however, only one participant (whose data were not included in the analyses) did not complete the questionnaire due to being unable to recall a recent incident of emotion (anxiety). In

searching for an explanation for these types of reported difficulties, it seems possible that the pressure of being asked to recall emotions without warning, at a particular moment in time, within the context of a psychology experiment, may have contributed to difficulties in recollection. As noted, however, all participants except one did report all four emotion types, and all of the emotion descriptions appeared to be realistic and meaningful.

The PEQ also revealed that over half of the participants (58%) had some difficulty describing their emotions in words, and it appears that this was due to the fact that emotions are hard to put into words rather than being an issue of privacy or discomfort with disclosure. This finding, combined with the observation that participants in this study did manage to provide descriptions for all four emotions and described emotions that were quite high in intensity, suggests that participants reported emotions that were important and meaningful to them.

In addition to difficulties with reporting emotions in their own words, just over one-quarter of the sample (27%) reported having some type of difficulties with the rating scale items on the questionnaire. Participants were not asked to describe their difficulties, however, so the exact nature of these difficulties remains unknown.

The final questions on the PEQ addressed the fact that participants had to respond to some of the same questions twice, once with regard to their feelings and once with regard to their displays of emotion. Responses to these items revealed that the vast majority of participants (89%) believed that they were able to separate their thinking about how they felt an emotion from their thinking about how they displayed the emotion. Given the strong and consistent effects for emotion domain, it appears that this is not only an important theoretical distinction, but also one that is common and relatively

easy to comprehend in everyday life. In addition, most participants (78%) reported just answering the questions with no type of identifiable response bias or response set. As previously noted, it seems possible that the participants who reported thinking that they were supposed to respond "differently" to both sets of questions might have been responding with certain instructions from the introduction in mind. That is, in the introduction participants were told about the dual focus on feelings and displays of emotion and were asked to pay careful attention to questions to know what they were being asked about. Thus, participants who reported responding differently to the two sets of questions may have been trying to indicate simply that they were aware of the difference in the nature of the questions and had answered the questions appropriately.

Of note is the fact that only a very small number of participants reported having difficulty with the dual focus of the questions, and this suggests that being asked the same questions twice was not at the root of the difficulties that participants reported having with rating scale questions. Instead, it may have been the wording of particular questions or the nature of the response scales for some particular items. For example, the appropriateness and consensus questions and response scales may have been confusing. Or, similar to the explanation for difficulties with describing emotions in words, it simply may have been that participants found it difficult to answer some of the rating scale questions about something as personal and subjective as emotions. Although the same types of response items were used in Studies 2 and 3 in order to maintain consistency in this series of studies, the nature of the emotion questionnaire would need to be further investigated before it is used more extensively.

The final findings of interest to emerge from Study 1 concerned the number of

words that participants used to describe their emotional experiences and expressions. Specifically, analysis of word count data revealed that females used more words to describe their feelings and displays of emotion than did males. Mean word counts revealed that females used approximately seven more words than males to describe feelings of emotion, and approximately 11 more words than males to describe displays of emotion. These gender differences could be due to any one or more of a number of factors. For example, this effect may reflect that fact that females, in general, are more verbal than males. Or it may be that females are more verbal than males especially when it comes to the topic of emotion, and this may suggest that females have better memories for emotional experiences or more well-elaborated schemas for emotion. Or it may be that females simply are more comfortable with disclosing their emotions and therefore are able to express them with more detail in this kind of context. Although the present study was not designed to explore this specific issue, these results are worthy of further attention in future research. It should be noted, however, that despite the significant differences in the numbers of words used by male and female participants to describe their emotions, the differences were not noticeable in a practical sense because reviewers of the anonymous emotion descriptions (including the principal experimenter and volunteer reviewers) were not aware of any differences from casual reading of the descriptions. And it is for this reason that this issue was not addressed further in the current series of studies.

Study 2

Overview

One of the difficulties inherent in any retrospective self-report methodology is

that little control is exercised over the specific emotional events that participants report. As a result, factors such as memory biases and social desirability may directly or indirectly affect the specific emotions that participants remember and choose to report. Thus, in these types of studies, some participants may describe very mild instances of emotional experience, whereas others describe more intense ones. Accordingly, it is important to identify within this context the extent to which these differences are systematic. Gender differences, for example, would be important to identify if they exist. Therefore, the purpose of Study 2 was to obtain objective ratings of the intensity of the emotional situations or triggers reported in Study 1. This was accomplished by removing all gender-relevant information from the emotion descriptions and asking a separate group of participants to rate them on intensity. An additional purpose of Study 2 was to determine the extent to which male and female observers differ in their judgments about the intensity of various emotion situations.

Method

Design

This study employed a 2 x 2 x 4 (Participant Gender x Experiencer Gender x Emotion Type) design. "Experiencer gender" here refers to the gender of the person who provided the emotion description in Study 1; however, experiencer gender was unknown to participants because of the gender-neutral nature of the materials. Participant gender, experiencer gender, and emotion type all were between-participants factors.

Materials

Emotion Descriptions. In total, 352 emotion descriptions were available from Study 1 (four each from 88 participants). Recall that in Study 1, participants provided

both a description of how they came to feel each particular emotion (the trigger), as well as a separate description of how their emotion showed (the display). The main purpose of Study 2 was to obtain ratings of the triggers with all references to gender and intensity of experience and expression removed, in order to determine if males and females reported emotion triggers that differed in objective intensity. However, in this study, separate ratings also were made for appropriateness of actual feelings and displays in order to obtain information that would assist in the construction of scenarios for Study 3.

In order to prepare the emotion descriptions obtained in Study 1 for use in Study 2, each description first was typed verbatim. However, because the main purpose of this study was to focus on gender-neutral triggers *separately* from the emotion displays, minor alterations subsequently were required in order to get the descriptions into an appropriate format. The general nature of these alterations is described in the following paragraphs; note, however, that every effort was made to keep alterations to a minimum and to maintain the essence of each original report.

First and foremost, any and all identifying information found in the emotion descriptions was removed or replaced with neutral information in order to further ensure anonymity. This means that all references to specific people, places, and events were altered if there was even a slight chance that someone else might be able to identify the experiencer based on that information. For example, when participants referred to friends or family members by name, the name was deleted and replaced by a pronoun or a phrase such as "my friend" or "my brother" and so on. Similarly, references to particular places of employment and recreation were replaced as necessary with more neutral information such as "a fast food restaurant" for McDonald's, "the bar" for the Horseshoe Cabaret, and

"my sports team," for CanWest football or Bison volleyball.

Second, and very importantly, all descriptions were altered to make them neutral with regard to gender. Many of these types of alterations were quite straight-forward, such as when the terms "boyfriend" and "girlfriend" were replaced with phrases such as "the person who I'm dating" or "my partner." Similarly, some references to gender were changed simply by replacing the pronouns "he" or "she" with "they" or "my friend" and so on. However, given the richness and detail of many of the descriptions, this task necessitated a wide range of alterations. For example, one female participant described the happiness she felt on the day of her graduation, complete with references to her hair, make-up, and gown, as well as a description of how handsome her date looked. This information was changed to make it applicable to both genders by describing the actor as taking "a lot of time to get ready," being "all dressed up," the date as being "very attractive," and so on. In another report a male participant described the anxiety he felt during preparation for an upcoming football game in a well-known western league. This information was changed to make the story about preparation for an unnamed sport in a serious competitive league; note that this type of change was possible because aside from the specific reference to the team, the original description could have applied to any other team sport. Other such alterations were made in other descriptions, many of them requiring only minor changes to render them gender-neutral.

Third, because the main purpose of this study was to obtain objective ratings of emotion *triggers*, statements regarding *expression or display* were separated from the description of the trigger for cases in which these overlapped. Note that these already were separated for the most part by the original participants according to the procedure

for Study 1; however, some participants also made reference to their response in their description of a trigger. So, for example, if a participant reported crying or arguing or engaging in some other type of responsive behaviour in his or her description of the trigger, this part of the description simply was moved to the display part of the description.

Finally, self-reported references to intensity in the descriptions also were moved to the description of display so that these would not bias objective ratings of the trigger. For example, one participant stated that he "was incensed and irate . . . very, very angry" upon discovering that his roommates ate his food and otherwise used his things while he was away for a weekend. In view of the fact that these types of references to emotional intensity might have affected objective ratings of the trigger, specific statements which referred to intensity were moved and descriptions continued as stated by the participant. In this way all references to intensity were moved to the description of the expression. Oftentimes these references to intensity were accompanied by a description of a response in the situation, such as "I was very upset when this happened, and I couldn't stop crying." In these cases all of this information was moved to the description of expression. These types of alterations were important because the main purpose of this study was to obtain objective ratings of the emotional situation or the events that triggered the emotional response, rather than of the response itself.

Also of note is the fact that grammar was changed slightly in several of the descriptions. Specifically, grammar was changed when the original descriptions were listed in point form or incomplete sentences (in order to make them full sentences), or when incorrect grammar seriously impeded comprehension of the situation. Again,

although the objective was to keep alterations to a minimum, some changes were necessary to make the descriptions comprehensible for participants in Study 2.

On the questionnaire one description of an emotional trigger was presented at a time and followed by two questions, and then on the following page the corresponding description of expression was presented and followed by two questions as detailed below. The ratings in this study are considered to be "objective" in the sense that gender was unspecified and therefore ratings should reflect responses to the category of *most people*, with both males and females included.

Objective Rating Questions. Objective intensity was assessed for each emotion trigger using a question that asked participants to estimate the intensity of emotion that would be most fitting to *feel* in the situation described. This was done using the same type of 9-point Likert scale employed in Study 1 to assess experienced intensity. On the scale for anger, for example, the very mild pole was labelled *very mild annoyance or anger* (0), the mid-point of the scale was marked *moderate annoyance or anger* (4), and the intense pole was labelled *very intense anger* (8) (see Appendix G, question 1). As an additional measure of trigger intensity, participants also were asked to indicate the intensity of emotion that would be most fitting to *show* in each situation. Again this was done using the same type of 9-point Likert scale (see Appendix G, question 2).

After responding to the questions concerning perceived levels of emotion aroused by the trigger, participants then turned to the next page and read about the manner in which the emotion was expressed. Given that each description of expression provided explicit information about extent of emotional expression and at least implicit or implied information about extent of emotional experience, participants were asked to rate the

appropriateness of both the intensity of emotional experience (feeling) and intensity of emotional expression (display). This was done using the same type of 9-point Likert scales as used in Study 1 to assess appropriateness of experience and expression. That is, the scales ranged from *extreme under-reaction* (-4), through *very fitting reaction* (0), to *extreme over-reaction* (+4) (see Appendix G, questions 3 and 4).

Organization. Due to the large number of total emotion descriptions, the descriptions were grouped according to experiencer gender and emotion type. That is, all of the anger descriptions provided by males were grouped together, all of the anger descriptions provided by females were grouped together, and so on. This resulted in eight groups of between 40 to 48 emotion descriptions. Each participant responded only to one of these groups of emotion descriptions and each group was presented in one of two random orders. Thus, a total of between 40 to 48 descriptions were rated by each participant. Given that there were 197 participants in this study (as described below), each individual description was rated by a minimum of 24 participants (12 males and 12 females).

Post-Experimental Questionnaire. After responding to all of the items, participants were asked to complete a PEQ in order to assess their interpretations of the study and to determine if any participants became aware of the true nature of the materials (see Appendix H). The first question on the PEQ asked participants if they had any questions or comments about the study. The second question asked if there was anything that would have made the descriptions more realistic or easier to understand. The third question asked if participants noticed anything unusual or not quite right about the descriptions, and, if so, what it was and approximately how many descriptions it

affected. The fourth item on the PEQ was the most specific, and asked participants if they had any difficulty with the fact that the gender of the people who experienced the emotions was not identified in the descriptions they read (see Appendix H).

Procedure

Participants completed the questionnaires in a classroom in groups of up to 20. Seating was arranged to ensure privacy. Participants were randomly assigned to one of the emotion conditions (gender and emotion type). Upon arrival, participants were told that the purpose of the study was to investigate perceptions of common emotional experiences. An Introduction Sheet was provided and read aloud by the experimenter (see Appendix I). The introduction outlined the procedure and described how participants should approach the task. Specifically, participants were informed that they would be asked to read about some real emotions experienced by a group of their peers and reported in previous research. Participants were informed that all of the descriptions were from different people and that they all were completely anonymous with all personal identifying information completely removed. At this time participants also were informed about the dual focus on experience and expression, and were asked to read all of the questions carefully. After the introduction to the study, participants were asked to provide informed consent for their participation using standardized consent forms (see Appendix D).

Participants completed the experimental task at their own pace. After responding to all of the emotion descriptions, they completed the PEQ (see Appendix H). Information forms describing the purpose and results of the study were made available to all participants once the data collection phase of the final study was complete (see

Appendix J).

Participants

In total, 99 male and 98 female participants were recruited from Introductory Psychology classes at the University of Manitoba. An a priori sample size analysis revealed that this sample size would provide sufficient power (minimum power = .87) to detect both main effects and interactions of moderate magnitude (effect size = .30) (Borenstein & Cohen, 1988). Separate sign-up booklets were used in order to approximate equal numbers of male and female participants. Space was provided for up to 20 participants to sign up for any one session, with room for 10 males and 10 females. As per the policy of the Psychology Department at the University of Manitoba, participants received experimental credits toward their class grades for participation.

Analyses

Data Preparation

Recall that each participant in this study made the same four types of ratings for many descriptions of the same emotion type provided by either male or female participants in Study 1. However, because each of these ratings could not be analyzed individually, an averaged summary score was calculated for each of the four items for each participant. For intensity of feeling elicited by the trigger, for example, this was accomplished by adding across each participant's ratings of this item for each description that they rated. An average or mean intensity of feeling score then was calculated by dividing by the number of emotion descriptions that the participant responded to. The same types of averages were calculated for intensity of display elicited, appropriateness of actual feeling, and appropriateness of actual display. In this way, each participant

contributed one average final score for each of the four rating items which were subjected to analysis as described in the following sections.

PEQ Responses

The main purpose of this study was to obtain objective judgments of the emotional situations described in Study 1 in terms of perceived intensity of experience and expression elicited by the trigger. Consequently, the specific nature of the task in this study required that participants approach the task with as few pre-determined ideas about gender as possible. Although it seemed possible that many participants might have made some type of implicit assumptions about gender, such as guessing the gender of the experiencer in each description, it was important to identify those who had particular difficulties with the gender issue or who made consistent assumptions across all of the descriptions. For this reason, the post-experimental questionnaires were examined first in order to gain some insight into the manner in which participants approached the experimental task, and to determine the extent to which participants were concerned with gender.

The first question on the PEQ asked participants if they had any questions or comments about the study. For this question, only 24 participants (12.2%) responded with a question or comment. Responses to this item were limited to comments about the length of the study, the unnecessary repetition of some descriptions (e.g., for anxiety many descriptions concerned entering university), and questions about whether other emotions also were being investigated (recall that participants responded to only one emotion type). These questions and comments were equally frequent over the conditions of participant gender, experiencer gender, and emotion type. None of the participants

mentioned anything about gender in response to this item.

The second question on the PEQ asked participants if there was anything that would have made the emotion descriptions more realistic or easier to understand. For this item, 46 participants (23.4%) responded. Here, many participants suggested very generally that the descriptions could have been improved by including more details about the people and situations involved. Some specific comments suggested that participants would have found it useful to know things about the personalities of the people in the stories, how long people in the stories had known each other, what their relationships were like, and so on. Another common comment was that the descriptions would have been easier to read if the grammar were improved and the details of the stories clarified (recall that the descriptions were modified only slightly from the actual responses provided by participants in Study 1). Only three participants (1.5% of the total) mentioned that including the gender of the experiencer would have made the descriptions easier to understand. Two males and one female mentioned gender, and these comments were distributed across the emotions of anger, anxiety, and happiness.

The third item on the PEQ asked participants if anything struck them as unusual or not quite right as they read through the descriptions. A total of 67 participants (34.0%) circled "yes" in response to this question. Again, the frequency of these responses did not differ among the conditions of participant gender, experiencer gender, or emotion type. When further asked how many of the descriptions struck them as unusual, the most frequent answer was "a few – 10 or less" (n = 38 or 56.7%), followed by "just 1 or 2" (n = 24 or 35.8%). Only two participants (3.0%) who thought that there was something unusual about the descriptions reported that this applied to "about half," and five (7.5%)

reported that it applied to "well over half." Participants next were asked to describe what it was that was unusual or not quite right about the descriptions. Here the focus appeared to be mostly on the emotional responses (rather than the triggers), with participants reporting that responses in specific situations seemed unusual or unrealistic. For example, two participants mentioned a description in which the experiencer reported going to the bar and getting drunk with friends in response to the sad incident of a friend dying. Only one participant mentioned the lack of reference to gender of the experiencer as unusual.

The final items on the PEQ asked participants if they had any difficulty with the fact that the gender of the person who experienced the emotion was not identified in the descriptions they read, and, if so, how this might have affected their responding. Here, 40 participants (21 males and 19 females, for a total of 20.3% of the sample) indicated that they did have difficulty with the lack of reference to gender. When asked how this might have affected their responses, participants most often stated that men and women tend to react differently in different situations, with women usually experiencing and expressing more emotion than men. In other words, participants simply stated the stereotype. For example, one participant stated that "women are more emotional and show it more than men." Another wrote "I would accept more open displays of emotion from women." Others wrote things such as "men and women react differently," "males tend to hide their feelings," and "girls and guys are expected to act differently." None of the participants, however, specifically or clearly articulated how this would have affected their responding, except for one female participant in the male anger condition who wrote that she "used less stereotyping [which] probably was the point." This was the only participant who articulated something close to the real rationale behind the task.

Of importance with regard to the final items on the PEQ is the fact that six participants (3.0% of the total, or 15.0% of those who responded that they did have difficulty with the lack of reference to gender) reported answering the questions from a female point of view or assuming that all of the experiencers in the descriptions were female. This occurred even though in five out of the six cases the experiencers actually were male. Four males and two females reported making this assumption. These six cases occurred for male anger (n = 1), male anxiety (n = 1), male happiness (n = 1), male sadness (n = 2), and female anxiety (n = 1). In the words of one male participant who reported assuming that the experiencers were female: "I guess it's just a natural bias." However, because the task for Study 2 in theory required that participants approach the ratings "objectively," these six participants were eliminated from the analyses to be reported. Although, of course, it is difficult to know what assumptions other participants might have been making as they read through the descriptions, it seemed most reasonable to eliminate those who were known to have had particular ideas in mind. The exclusion of these six participants left 95 male participants and 96 female participants in the sample, for a total of 191 participants.

Overall, then, according to the responses to the PEQ, participants did not appear to be overly concerned with the fact that gender was not identified in the emotion descriptions. In fact, only four participants (2.0%) mentioned anything about gender in response to the first three items. Although 40 participants (20.3%) responded that they did have difficulty with the fact that gender was not identified in the descriptions when specifically asked about this, none of these participants were able to articulate clearly how this type of information would have affected their responding. Instead, most simply

stated the stereotype that men and women respond differently to emotional situations. The exceptions, of course, were the six participants who assumed that the descriptions were from females, and data from these participants were not included in subsequent analyses.

Intensity of Feelings and Displays Elicited by the Triggers

Similar to the ratings made in Study 1, participants in Study 2 provided ratings for both experience and expression of emotion. However, whereas participants in Study 1 rated the intensity of emotions as they *actually* experienced and expressed them in particular situations, participants in Study 2 were asked to indicate the intensity of emotion that *would be most fitting to feel* in each situation and the intensity of emotion that *would be most fitting to display* in each situation. In other words, participants in this study were asked to rate the level of emotion that would be most appropriate to feel and show in each situation, or the level of emotion most appropriately elicited in each situation. Another way to state the distinction is to say that participants in Study 1 responded to the question of "how sad (or angry or anxious or happy) were you in this situation?" whereas participants in Study 2 were asked, in essence, "how sad (or angry or anxious or happy) is this situation?" In order to maintain the distinction between Study 1 ratings of actual intensity and Study 2 ratings of most fitting or appropriate intensity elicited by the triggers, intensity as it was rated in Study 2 is referred to as "objective intensity." Recall that ratings were considered to be "objective" in the sense that they were made with the effects of gender and self removed.

In order to simplify interpretation of the data, ratings for objective intensity of feelings and displays were analyzed using separate 2 x 2 x 2 ANOVAs for each of the

four emotion types, with participant gender and experiencer gender as between-participants factors, and emotion domain as a within-participants factor. Again, due to the relatively large number of analyses conducted in this study and the concern with avoiding reference to trivial effects, all hypotheses were tested at the critical level of $p < .01$.

Recall that the main issue of concern in Study 2 was whether or not the emotion situations described by male and female participants in Study 1 differed with regard to intensity of the trigger. The descriptive statistics for objective intensity are shown in Table 7, and are broken down by experiencer gender (males vs. females) and emotion domain (experience vs. expression, labelled as feeling and display). Note that in order to facilitate interpretation of the data, the table includes means for intensity averaged across the emotions (called composite scores), as well as means collapsed across experiencer gender (all experiencers). In addition, means for intensity are reported collapsed across emotion domain (called combined scores) in order to facilitate interpretation of effects collapsed across feelings and displays.

Table 7

Study 2 - Mean Objective Intensity Ratings (and Standard Deviations) for Triggers as a Function of Experiencer Gender, Emotion Type, and Emotion Domain

	Experiencer Gender					
Emotion	Male		Female		All Experiencers	
	M	(SD)	M	(SD)	M	(SD)
Anger						
Feeling	4.98	(1.05)	5.62	(1.03)	5.31	(1.08)
Display	4.03	(0.96)	4.80	(1.19)	4.42	(1.14)
Combined	4.51	(0.95)	5.21	(1.07)	4.87	(1.06)
Anxiety						
Feeling	5.49	(0.91)	5.42	(0.89)	5.45	(0.89)
Display	3.99	(1.20)	4.50	(0.86)	4.24	(1.07)
Combined	4.74	(0.96)	4.96	(0.78)	4.85	(0.87)
Happiness						
Feeling	5.99	(0.91)	6.08	(0.90)	6.04	(0.89)
Display	5.55	(0.95)	5.67	(0.70)	5.61	(0.82)
Combined	5.77	(0.91)	5.87	(0.74)	5.82	(0.82)
Sadness						
Feeling	5.30	(0.87)	5.49	(0.97)	5.40	(0.82)
Display	4.35	(0.79)	4.80	(0.93)	4.59	(0.89)
Combined	4.82	(0.73)	5.15	(0.89)	4.99	(0.82)
Composite						
Feeling	5.44	(0.99)	5.65	(0.97)	5.55	(0.99)
Display	4.47	(1.16)	4.95	(1.02)	4.72	(1.11)
Combined	4.96	(1.00)	5.30	(0.93)	5.13	(0.98)

Note. Higher scores indicate higher objective intensity ratings.

Inspection of the means in Table 7 revealed some interesting observations about objective intensity ratings. First, ratings for objective intensity of feelings ranged approximately between the values of five and six on the *0* to *8* scales. Thus, it would appear that observers of the emotion triggers rated these triggers as fairly intense, but not as intense as participants in Study 1 rated their own feelings in response to these triggers. Recall that ratings for intensity of feelings in Study 1 all were close to a value of six or above on the *0* to *8* scales (see Table 1). Specifically, the value for overall self-ratings of feeling intensity across all participants and all emotions in Study 1 was $M = 6.46$ whereas the comparable value for ratings of objective intensity in Study 2 was $M = 5.55$. Although this observation must be interpreted with considerable caution as it involves a comparison across studies, it does suggest that experiencers reported feeling more emotion than observers judged would be appropriate to feel in those situations.

Continued inspection of Table 7 revealed that ratings for objective expression appeared to be lower than those for objective experience and averaged around the mid-point of the scale or above ($M = 4.72$), indicating that objective expression overall was rated at least as moderate. These judgments approximate those of Study 1 in which average self-ratings for intensity of expression also averaged just above the mid-point of the scale ($M = 5.01$). Thus, it would appear that although both experiencers of emotion and observers of emotional situations rated actual and objective intensity of emotional expressions as less intense than emotional experiences, they did not agree on the extent of this discrepancy. That is, although experiencers and observers rated expressions similarly, they differed in terms of intensity of experience in the emotional situations, with experiencers reporting feeling more emotion than observers thought would be

appropriate to feel in those situations.

Separate one-way ANOVAs on intensity of feelings and intensity of displays were performed in order to examine the apparent difference in intensity ratings across emotion type. Specifically, inspection of the combined means for feelings and displays collapsed across experiencer gender (see Table 7) suggested that happiness was rated as eliciting more intense feelings and displays ($M = 5.82$) as compared to the emotions of anger ($M = 4.87$), anxiety ($M = 4.85$), and sadness ($M = 4.99$). The ANOVAs revealed that there were in fact differences among the four emotion types (F (3, 187) = 5.77, $p <$ .001 for feelings, and F (3, 187) = 18.53, $p < .001$ for displays). Post-hoc Bonferroni comparisons confirmed that happiness was rated as eliciting more intense experience and expression of emotion than any of the other three emotions. These results are in accord with those of Study 1 because participants in that study rated their own feelings and displays of happiness as more intense than their feelings and displays of anger, anxiety, and sadness.

Another purpose of the present study was to examine the extent to which male and female observers of emotion differed in their perceptions of emotional situations. The descriptive statistics for average ratings made by male and female participants are reported in Table 8. Again, the table includes means for objective intensity averaged across feelings and displays (combined scores), averaged across the emotions (composite scores), as well as collapsed across participant gender (all participants).

Table 8

Study 2 - Mean Objective Intensity Ratings (and Standard Deviations) for Triggers as a Function of Participant Gender, Emotion Type, and Emotion Domain

	Participant Gender					
Emotion	Male		Female		All Participants	
	M	(SD)	M	(SD)	M	(SD)
Anger						
Feeling	5.04	(1.08)	5.57	(1.03)	5.31	(1.08)
Display	4.24	(1.02)	4.60	(1.24)	4.42	(1.14)
Combined	4.64	(1.01)	5.08	(1.08)	4.87	(1.06)
Anxiety						
Feeling	5.56	(0.82)	5.35	(0.97)	5.45	(0.89)
Display	4.24	(1.02)	4.25	(1.14)	4.24	(1.07)
Combined	4.90	(0.84)	4.80	(0.93)	4.85	(0.87)
Happiness						
Feeling	5.84	(0.94)	6.23	(0.82)	6.04	(0.89)
Display	5.51	(0.79)	5.72	(0.85)	5.61	(0.82)
Combined	5.67	(0.82)	5.97	(0.80)	5.82	(0.82)
Sadness						
Feeling	5.06	(0.95)	5.73	(0.78)	5.40	(0.82)
Display	4.36	(0.84)	4.80	(0.90)	4.59	(0.89)
Combined	4.71	(0.80)	5.27	(0.76)	4.99	(0.82)
Composite						
Feeling	5.38	(1.00)	5.72	(0.95)	5.55	(0.99)
Display	4.59	(1.05)	4.85	(1.16)	4.72	(1.11)
Combined	4.98	(0.95)	5.28	(0.99)	5.13	(0.98)

Note. Higher scores indicate higher objective intensity ratings

Data from Tables 7 and 8 are referred to in the following analyses. Each of the emotions were analyzed separately to examine possible differences due to the factors of participant gender, experiencer gender, and emotion domain.

Anger. The 2 x 2 x 2 (Participant Gender x Experiencer Gender x Emotion Domain) ANOVA for objective intensity of anger feelings and displays revealed a marginally significant main effect for experiencer gender, $F(1, 43) = 5.88, p < .02$. These results indicated that the anger triggers described by females were rated as eliciting greater intensity of combined angry feelings and displays ($M = 5.21$) than the anger triggers described by males ($M = 4.51$) (see Table 7). The magnitude of this effect, however, was small ($\eta^2 = .12$).

The ANOVA also revealed a main effect for emotion domain, $F(1, 43) = 79.72, p < .001$, indicating that ratings of objective intensity differed across feelings and displays of anger. Specifically, this effect indicated that, across participant gender and experiencer gender, the triggers were rated as eliciting more intense feelings of anger ($M = 5.31$) than displays of anger ($M = 4.42$). Estimates of effect size revealed this to be an effect of large magnitude ($\eta^2 = .65$). No other significant effects were found for the emotion of anger.

Anxiety. The 2 x 2 x 2 (Participant Gender x Experiencer Gender x Emotion Domain) ANOVA for objective intensity of anxiety feelings and displays revealed only a main effect for emotion domain, $F(1, 43) = 91.20, p < .001$. This effect indicated that the anxiety triggers were rated as eliciting more intense feelings of anxiety ($M = 5.45$) than displays of anxiety ($M = 4.24$). The magnitude of this effect was large ($\eta^2 = .68$).

Happiness. The same type of ANOVA for objective intensity of happiness feelings and displays similarly revealed an effect only for emotion domain $F(1, 44) =$

32.15, $p < .001$. Specifically, across participant gender and experiencer gender, happiness triggers were rated as eliciting more intense feelings ($M = 6.04$) than displays of happiness ($M = 5.61$). Although the actual difference between these means was not large, estimates of effect size revealed this to be an effect of substantial magnitude ($\eta^2 = .42$).

Sadness. The 2 x 2 x 2 (Participant Gender x Experiencer Gender x Emotion Domain) ANOVA for elicited intensity of sadness feelings and displays revealed a marginally significant main effect for participant gender, $F(1, 45) = 6.19, p < .017$, indicating that male and female participants differed in their ratings of sadness intensity. Specifically, females rated the sad descriptions as eliciting more intensely sad feelings and displays ($M = 5.27$) than did males ($M = 4.71$) (see Table 8). The actual difference between these means was not large, however, and an estimate of effect size confirmed that this was an effect of relatively small magnitude ($\eta^2 = .12$).

The only other significant effect for sadness was the familiar main effect for emotion domain, $F(1, 45) = 56.36, p < .001$. Thus, across participant gender and experiencer gender, sadness triggers were rated eliciting more intense feelings ($M = 5.40$) than displays of sadness ($M = 4.59$). Again, paralleling the results from the other three emotions, this was an effect of large magnitude ($\eta^2 = .56$).

Appropriateness of Feelings and Displays

The main issue to be addressed in Study 2 concerned the extent to which the emotion *triggers* reported by male and female participants in Study 1 differed in terms of objective intensity. However, participants in Study 1 also provided information about their response in all of the situations reported, and this information also was rated by participant-observers in Study 2. These ratings were obtained primarily for descriptive

purposes and as an aide in the preparation of materials for Study 3. Nonetheless, these data were analyzed in a manner analogous to that used for intensity and the results are reported here.

For appropriateness, recall that participants provided ratings for both experience and expression of emotion. Appropriateness ratings for feelings and displays were analyzed using the same types of one-sample t-tests that were employed in Study 1, as well as a series of 2 x 2 x 2 ANOVAs for each emotion type, with participant gender and experiencer gender as between-participants factors, and emotion domain as a within-participants factor. Recall that appropriateness ratings were made using scales that ranged from *extreme under-reaction* (-4), through *very fitting reaction* (0), to *extreme over-reaction* (+4) (see Appendix G, questions 3 and 4). Thus, the mid-point of each scale was zero and indicated an "appropriate" response, with higher positive numbers reflecting the tendency toward ratings of "over-reaction" and higher negative numbers reflecting the tendency toward ratings of "under-reaction."

The descriptive statistics for appropriateness ratings for male and female experiencers are reported in Table 9. The table includes means for appropriateness averaged across feelings and displays (combined scores), averaged across the emotions (composite scores), as well as collapsed across experiencer gender (all experiencers).

Table 9

Study 2 - Mean Appropriateness Ratings (and Standard Deviations) as a Function of Experiencer Gender, Emotion Type, and Emotion Domain

	Experiencer Gender					
Emotion	Male		Female		All Experiencers	
	M	(SD)	M	(SD)	M	(SD)
Anger						
Feeling	0.65	(0.33)	0.41	(0.36)	0.53	(0.36)
Display	0.88	(0.43)	0.49	(0.35)	0.68	(0.43)
Combined	0.76	(0.35)	0.45	(0.32)	0.60	(0.37)
Anxiety						
Feeling	0.54	(0.53)	0.84	(0.54)	0.69	(0.55)
Display	0.57	(0.48)	0.89	(0.33)	0.72	(0.44)
Combined	0.55	(0.42)	0.86	(0.40)	0.70	(0.43)
Happiness						
Feeling	0.34	(0.63)	0.37	(0.42)	0.36	(0.52)
Display	0.41	(0.49)	0.51	(0.43)	0.46	(0.46)
Combined	0.38	(0.54)	0.44	(0.41)	0.41	(0.48)
Sadness						
Feeling	0.17	(0.65)	0.42	(0.39)	0.30	(0.54)
Display	0.13	(0.43)	0.62	(0.35)	0.39	(0.45)
Combined	0.15	(0.50)	0.52	(0.34)	0.35	(0.46)
Composite						
Feeling	0.43	(0.57)	0.50	(0.46)	0.47	(0.52)
Display	0.50	(0.53)	0.60	(0.39)	0.56	(0.47)
Combined	0.46	(0.51)	0.56	(0.40)	0.51	(0.46)

Note. Appropriateness ratings were made using scales that ranged from *extreme under-reaction* (-4), through *appropriate reaction* (0), to *extreme over-reaction* (+4).

Inspection of the means in Table 9 revealed some interesting observations about appropriateness ratings as they applied to the actual experiences and expressions reported by Study 1 participants in response to the emotion triggers. Specifically, all of the mean values ranged between zero and one on the *-4* to *+4* scales. Thus, all of the ratings were similar in that they were located on the positive side of the scale between the "appropriate" and "slight over-reaction" indices. These ratings parallel the self-ratings from Study 1 in the sense that appropriateness ratings in both studies were not extreme and varied closely around the same points on the scale (see Tables 3 and 9).

Four one-sample t-tests conducted on the overall feeling and display scores for male and female experiencers revealed that they all differed significantly from the zero or "appropriate" point on the scale. Thus, both the feelings ($M = 0.43$) and displays ($M = 0.50$) of males and the feelings ($M = 0.50$) and displays ($M = 0.60$) of females were rated as "slight over-reactions" ($t\ (92) = 7.24, p < .001$; $t\ (92) = 9.12, p < .001$; $t\ (97) = 10.71, p < .001$; and $t\ (97) = 15.61, p < .001$, respectively). Recall from Study 1 that both male and female participants rated their own feelings ($M's = 0.70$ and 0.59) as "slight over-reactions," whereas self-ratings for display were closer to "appropriate."

Another concern in this study was whether male and female observers would differ in their perceptions of emotional situations and emotional responses. The descriptive statistics for appropriateness ratings made by male and female participants are reported in Table 10. Again, the table includes means for appropriateness averaged across feelings and displays (combined scores), averaged across the emotions (composite scores), as well as collapsed across participant gender (all participants).

Table 10

Study 2 - Mean Appropriateness Ratings (and Standard Deviations) as a Function of Participant Gender, Emotion Type, and Emotion Domain

	Participant Gender					
Emotion	Males		Females		All Participants	
	M	(SD)	M	(SD)	M	(SD)
Anger						
Feeling	0.47	(0.38)	0.58	(0.34)	0.53	(0.36)
Display	0.62	(0.39)	0.74	(0.47)	0.68	(0.43)
Combined	0.54	(0.35)	0.66	(0.38)	0.60	(0.37)
Anxiety						
Feeling	0.79	(0.70)	0.58	(0.31)	0.69	(0.55)
Display	0.75	(0.55)	0.70	(0.29)	0.72	(0.44)
Combined	0.77	(0.55)	0.64	(0.26)	0.70	(0.43)
Happiness						
Feeling	0.35	(0.45)	0.36	(0.59)	0.36	(0.52)
Display	0.47	(0.38)	0.45	(0.53)	0.46	(0.46)
Combined	0.41	(0.41)	0.40	(0.55)	0.41	(0.48)
Sadness						
Feeling	0.39	(0.43)	0.22	(0.62)	0.30	(0.54)
Display	0.56	(0.41)	0.23	(0.44)	0.39	(0.45)
Combined	0.47	(0.38)	0.22	(0.50)	0.35	(0.46)
Composite						
Feeling	0.50	(0.53)	0.43	(0.51)	0.47	(0.52)
Display	0.60	(0.45)	0.52	(0.49)	0.56	(0.47)
Combined	0.55	(0.45)	0.48	(0.47)	0.51	(0.46)

Note. Appropriateness ratings were made using scales that ranged from extreme under-reaction (-4), through appropriate reaction (0), to extreme over-reaction (+4).

One sample t-tests on the composite feeling and display scores provided by male and female participants revealed that they all differed significantly from the zero or the appropriate point on the scale. Specifically, both males (*M's* = 0.50 and 0.60) and females (*M's* = 0.43 and 0.52) tended to rate feelings and displays of emotion as "slight over-reactions" (t (95) = 9.24, $p < .001$; t (95) = 13.08, $p < .001$; t (96) = 8.30, $p < .001$; and t (96) = 10.60, $p < .001$, respectively).

Inspection of the means in Table 10 revealed no other strong or consistent patterns. Nevertheless, to check for possible differences due to the factors of participant gender, experiencer gender, and emotion domain, separate ANOVAs on appropriateness were conducted for each emotion type. Again, given the relatively small range of values and small mean differences, any significant differences found in the analyses are interpreted cautiously as relative effects.

Anger. The 2 x 2 x 2 (Participant Gender x Experiencer Gender x Emotion Domain) ANOVA for appropriateness of actual anger feelings and displays revealed a main effect for experiencer gender, F (1, 43) = 9.91, $p < .003$. These results indicated that the combined anger feelings and displays described by males (M = 0.76) were rated as relatively greater over-reactions than the combined anger feelings and displays described by females (M = 0.45) (see Table 9). The magnitude of this effect was not large (η^2 = .19), however, although it is suggestive of an interesting trend given the finding that the anger triggers of female experiencers were rated as eliciting greater intensity of feelings and displays (M = 5.21) than those of male experiencers (M = 4.51) (see Table 7).

The ANOVA also revealed a main effect for emotion domain, F (1, 43) = 11.43, $p < .002$, $\eta^2 = .21$. This effect indicated that, across participant gender and experiencer

gender, anger displays ($M = 0.68$) were rated as relatively greater over-reactions than anger feelings ($M = 0.53$). The actual difference between these mean ratings was small, however. No other significant effects were found for the emotion of anger.

Anxiety. The 2 x 2 x 2 (Participant Gender x Experiencer Gender x Emotion Domain) ANOVA for appropriateness of anxiety feelings and displays revealed only a marginally significant main effect for experiencer gender, $F(1, 43) = 6.34, p < .016$. This effect indicated that the combined anxiety feelings and displays of females ($M = 0.86$) were rated as relatively greater over-reactions than those of males ($M = 0.55$) (see Table 9). Again, however, the effect was of small magnitude ($\eta^2 = .13$). There were no other significant effects for anxiety.

Happiness. The same type of ANOVA for intensity of happiness feelings and displays revealed only an effect for emotion domain $F(1, 44) = 7.70, p < .008, \eta^2 = .15$, indicating that ratings of appropriateness for happiness feelings differed from ratings of appropriateness for happiness displays. Thus, across participant gender and experiencer gender, happiness displays ($M = 0.46$) were rated as relatively greater over-reactions than happiness feelings ($M = 0.36$). Again, however, the difference between the means was negligible.

Sadness. The 2 x 2 x 2 (Participant Gender x Experiencer Gender x Emotion Domain) ANOVA for appropriateness of sadness feelings and displays revealed only a main effect for experiencer gender, $F(1, 45) = 9.32, p < .004, \eta^2 = .17$. This effect indicated that the combined sadness feelings and displays of females ($M = 0.52$) were rated as relatively greater over-reactions than the combined sadness feelings and displays of males ($M = 0.15$) (see Table 9).

Discussion

Clearly the effects of most interest for Study 2 involved experiencer gender. This is, of course, because the purpose of this study was to determine whether male and female participants in Study 1 provided emotion descriptions that differed in objective intensity. Based on prior research and the content of gender stereotypes of emotion, it seemed possible that female participants in Study 1 might have described emotional situations that were more intense than those described by males. However, this turned out to be the case only for the emotion of anger. Specifically, the anger triggers reported by female participants in Study 1 were rated as eliciting slightly greater intensity of angry feelings and displays than the anger triggers reported by males. Although the magnitude of this effect was small, it is nonetheless very interesting because it is the opposite of what might have been expected for this emotion. That is, because the emotion of anger tends to be associated with men more than with women, it seemed reasonable to expect that males in Study 1 might have reported more intense anger triggers than females. Instead, however, the emotion triggers of females were rated as more intense than those of males only for anger, which is the only emotion that is characteristically associated with men. The analyses for intensity revealed no other significant effects for experiencer gender; this outcome, combined with the fact that the effect for anger was only small, suggests that, overall, male and female participants in Study 1 described emotional situations of approximately equal intensity.

Also of interest in Study 2 was the extent to which male and female participants who acted as observers of emotion triggers and emotional reactions would differ in their perceptions of those events. Contrary to what might be expected based on the literature

revealing gender differences in emotion as well as on gender stereotypes of emotion, only one marginally significant effect for participant gender was found. Specifically, the only intensity effect for participant gender occurred for the emotion of sadness, with females rating sadness triggers as eliciting more intensely sad feelings and displays than did male participants. This result suggests that although male and female observers may not differ in their perceptions of other emotional situations, they may differ in their perceptions of triggers for sadness. Recall also that female participants in Study 1 rated their own experiences and expressions of sadness as more intense than did males; however, ratings of objective intensity for male and female sadness triggers did not differ in Study 2 (i.e., there was no experiencer gender effect for sadness). This set of findings suggests that females may evaluate sad situations as sadder than males evaluate those same situations, and that females also tend to both feel and show more sadness in those situations. Thus, males and females may differ at least somewhat in their perceptions for the emotion of sadness. However, the complete lack of effects due to participant gender for the other emotions suggests that males and females did not differ substantially in their perceptions of anger, anxiety, or happiness as measured by this study. That is, with the exception of the intensity of sadness triggers, there was no evidence to suggest that men and women look at the same emotional situations and interpret them differently in terms of intensity of the trigger or appropriateness of the response.

Turning now to other significant effects and observations, the only consistent finding across emotion type for ratings of objective intensity concerned the factor of emotion domain. Specifically, for all four emotion types, feelings elicited by the triggers were rated as more intense than displays elicited by the triggers. Thus, for anger, anxiety,

happiness, and sadness triggers, objective intensity of feeling was rated as greater than objective intensity of display. Estimates of effect size revealed that effects for emotion domain were large, so it would appear that the comparison between experience versus expression of emotion is important to take into account when considering perceived intensity of emotion. This finding is in accord with the results of Study 1 and research on the secret self which suggests that individuals tend to view themselves as feeling inwardly more emotion than they show outwardly. The current results suggest that individuals who are observing emotional situations think that it is more fitting to feel emotion than it is to display emotion in those situations. In other words, observers of emotion tend to think that it is not appropriate to show outwardly all of the emotion that one is feeling inwardly.

Inspection of the means for objective intensity revealed some other interesting observations with regard to objective intensity ratings. Specifically, whereas observers of emotional triggers rated those triggers overall as eliciting fairly intense feelings of emotion, ($M = 5.55$), participants in Study 1 rated their own feelings in those situations as even more intense ($M = 6.46$). Although this observation must be interpreted with caution because it is based on a comparison across studies, it is important because it suggests that individuals may experience more intense emotions than observers think are appropriate or justified in particular situations. This observation is especially interesting in view of the consensus results from Study 1 which indicated that experiencers of emotion thought that others would both experience and express the same amount of emotion as they themselves did given the same circumstances. Results from Study 2, however, suggest that observers saw the emotional situations as eliciting less intense feelings than

experiencers reported feeling. Ratings of appropriateness revealed that observers rated the actual feelings of experiencers as slight over-reactions. In addition, recall that participants in Study 1 had a tendency to rate their own feelings as slight over-reactions. Experiencers and observers were similar in this regard, then, because they both rated actual feelings as slight over-reactions.

In contrast to the observation for objective intensity of experience, ratings of objective intensity of expression in Study 2 closely paralleled those of Study 1. That is, observers in Study 2 rated the emotional situations as eliciting approximately the same intensity of expression ($M = 4.72$) that participants reported actually showing in Study 1 ($M = 5.01$). This result suggests that although experiencers might have a tendency to *feel* more emotion than observers think is appropriate or justified in emotional situations, those same experiencers may actually *show* a lower level of emotion that is more in accord with the level that observers think is appropriate. However, recall that appropriateness ratings in Study 2 indicated that, like feelings, displays also were rated as slight over-reactions. In fact, observers in Study 2 rated displays as over-reactions to approximately the same (slight) extent as feelings, whereas experiencers in Study 1 rated displays as closer to the appropriate point on the scale.

One other comparison of note is that experiencers and observers concurred on the relative intensity of the different emotion types. That is, experiencers rated their happiness feelings and displays as most intense, and observers similarly rated the happiness triggers as eliciting the most intense feelings and displays of emotion. Thus, it would appear that the reason that participants in Study 1 rated happiness as the most intense emotion is that they actually described happiness triggers that were more intense

than those for the other three emotions. Alternatively, it may be that both experiencers and observers of emotion alike perceive happiness (which was the only positive emotion assessed in these studies) as more intense overall compared to other (negative) emotions.

Appropriateness ratings were obtained in Study 2 mostly for the purposes of assisting in the construction of scenarios for Study 3, although for investigative purposes they were analyzed in the same manner as were the ratings for intensity. It was stated at the outset, however, that all of the mean appropriateness ratings were between zero and one on the scales that ranged from *-4* through *0* to *+4*, indicating that appropriateness ratings varied between "appropriate reaction" and "slight over-reaction." Therefore, many of the significant findings reflect only minor relative differences.

For appropriateness, there were main effects for experiencer gender for the emotions of anger, anxiety, and sadness, although the effects were not in a consistent direction across these emotions. That is, whereas the anger feelings and displays of males were rated as slightly greater over-reactions than those of females, the anxiety and sadness feelings and displays of females were rated as slightly greater over-reactions than those of males. Thus, there were no consistent effects concerning experiencer gender for appropriateness. The result indicating that the anger feelings and displays of males were rated as greater over-reactions than those of females is interesting, however, given the fact that the anger triggers reported by males were rated as less intense than those reported by females.

The factor of emotion domain did not provide the same type of consistent effects for ratings of appropriateness as it did for ratings of intensity. Specifically, there were significant effects for emotion domain only for the emotions of anger and happiness. For

both of these emotions, displays of emotion were rated as greater over-reactions than feelings.

To conclude the discussion for Study 2, the important effect for experiencer gender was found only for the emotion of anger, and, although significant, the effect was revealed to be of small magnitude. In view of this finding and the lack of significant effects for the other three emotions, it would appear that the emotion triggers reported by male and female participants in Study 1 generally were comparable in terms of intensity of feelings and intensity of displays elicited. Thus, it would appear that the results of Study 1, which indicated that females overall rated their emotions as more intense than males, especially for the emotions of happiness and sadness, cannot be accounted for by differences in objective intensity of the emotional situations. In terms of participant or observer gender, there was one marginally significant effect for the emotion of sadness, with females rating the sadness triggers as eliciting more intensely sad feeling and displays than did males. However, the relatively small magnitude of this effect combined with the lack of differences in male and female participants' perceptions of the other emotion triggers and reactions adds to the evidence which suggests that males and females may be more similar in their perceptions of emotions than they are different.

Study 3

Overview

Study 1 in this series was designed to provide information concerning men's and women's perceptions and explanations of their own emotional experiences and expressions, while Study 2 was designed to obtain observers' objective ratings of the emotions described in Study 1 and to examine gender differences in perceptions of

emotional situations. The main focus of Study 3 also was on observers' perceptions, but in this study gender of the emotional target person was specified and manipulated as part of the research design. Recall that, as revealed by the review of research on gender stereotypes and emotion, women and men commonly are viewed as differing in characteristic emotionality. That is, women are viewed as more emotional in terms of both experience and expression than are men. Although a large body of research has confirmed that these stereotypes are prevalent and pervasive, much less work has been directed toward elaborating the details of these stereotypes and examining their effects on perceptions and explanations of specific emotional experiences. This was the main purpose of Study 3.

In this study, four scenarios describing particular emotion triggers were created (one for each emotion type) based on the descriptions provided in Study 1 and rated in Study 2, as well as on the basis of extensive pre-testing. Participants in Study 3 then read each scenario which described a particular emotion trigger. Across participants, the scenarios varied in terms of target gender and intensity of the emotional response. Participants answered questions about the emotions from the perspective of an observer. The questionnaire items employed in this study were analogous to those used in Study 1.

Note that the term "observer" in this context is used to refer to a person who is told about the circumstances surrounding an emotion as well as the extent to which it was experienced and expressed, rather than one who directly witnesses the emotional event. This type of methodology, in which hypothetical stories or scenarios are used as emotional stimuli, has been employed in many and varied studies of emotions (e.g., Johnson, 1987; Johnson & Schulman, 1988; Lui et al., 1992; Reisenzein & Hoffman,

1990; Robinson & Johnson, 1997; Roseman, 1991; Schimmack & Deiner, 1997). In these studies, participants read about an affect-eliciting situation and imagined themselves or some other specified target in that situation. With regard to the strength of this methodology, Johnson (1987) has argued:

> Because one may frequently assess the emotionality of another when that person is not present—that is, by recalling relevant behaviour and/or by mentally simulating the response of the other to an anticipated event, the experimental task has its own inherent external validity. (p. 568)

It also could be argued that people often learn about emotional reactions through descriptions provided by observers who witnessed the emotion, or by the experiencer him- or herself. That is, it is common in everyday life to learn about the emotions of others through sources other than direct observation.

In this study, participants read about what they believed were other people's real emotions and then answered questions about them from the perspective of an observer. However, really only one emotion situation existed for each emotion type, such that there was one basic trigger for anger, one for anxiety, and so on. These emotion triggers were pre-selected to be of a particular objective intensity based initially on the ratings provided in Study 2 as well as on extensive pre-testing as described below; that is, ratings from careful pre-testing indicated that these triggers were judged objectively to elicit relatively moderate intensity of experience and intensity of expression. Thus, intensity of the emotion trigger was held at a constant level in this study. What did vary, however, was intensity of the experienced and expressed response to the trigger, such that the overall response was described either as milder than the trigger, as matching the trigger, or as

more intense than the trigger. In this study, experience and expression were not described in separate sections; instead, the emotion trigger was presented along with the overall response. As a result, the overall response, which included elements of *both* experience and expression, is referred to in this study as "response intensity." Given that the objective intensity of each emotion trigger was known, the mild response indicated an under-reaction, the matching moderate response indicated an appropriate reaction, and the intense response indicated an over-reaction.

To summarize, the basic design of this study was a 2 x 2 x 3 factorial (Participant Gender x Target Gender x Response Intensity: Under, Appropriate, Over). In addition, participants responded to each of the four emotion types. Thus, male and female participants read about male or female targets who were described as experiencing mild, moderate, or intense reactions in response to moderately intense emotion triggers. One basic trigger of moderate intensity existed for each emotion type, and was paired with each of the response intensities to create the under-reaction, appropriate reaction, and over-reaction conditions. The scales were almost identical to those employed in Study 1, except, of course, they were phrased to be about someone else's emotions rather than one's own. Note that, although reactions were described in terms of overall emotional response, participants nonetheless were asked to think about and rate components of emotional experience separately from emotional expression (as they did in Studies 1 and 2). Separate ratings of experience and expression are important given the evidence which suggests that men and women may be perceived to differ more in terms of the external display of their emotions than in the internal experience of those emotions (e.g., Fabes & Martin, 1992; Johnson & Schulman, 1988). Thus, emotion domain, as well as attribution

type, were used in some of the analyses as they were in the previous studies.

Hypotheses for this study are described next according to each of the dependent measures; however, given the large number of variables to be studied and the exploratory nature of some of the analyses, some of the hypotheses are discussed in terms of questions to be answered rather than specific predictions. Hypotheses and questions to be explored are based on the same theory and research that provided the foundation for the previous two studies. Again, few a priori predictions were made with regard to emotion type, although emotion-specific patterns were explored and described as appropriate. As well, assuming that male and female participants share common gender stereotypes, no effects for participant gender were predicted. Thus, the critical variables of interest were target gender and response intensity.

Hypotheses

Intensity of Experience and Expression

In this study, participants read about the event that triggered a particular type of emotion as well as the target's response in that situation. Intensity of emotional experience was briefly stated and also could be inferred from the description which included information regarding emotional expression. For the dependent measures, participants were asked to indicate the intensity with which they thought the target experienced the emotion, as well as their judgments about how intensely the target expressed the emotion.

Given that response intensity was a manipulated variable in this study, certain predictions were apparent. That is, a main effect for response intensity was expected such that, for both experience and expression, responses that were created to be intense would

be rated as more intense than responses that were created to be moderate, which in turn would be rated as more intense than responses that were created to be mild (this would serve essentially as a manipulation check). In addition, the usual secret self effect was expected in the form of a main effect for emotion domain, with emotional experience rated as more intense than emotional expression; that is, experiencers would be rated as having felt more emotion that they displayed outwardly. However, the magnitude of this effect remained in question given that it is usually smaller when judging others as compared to oneself (Johnson, 1987; Johnson et al., 1988).

Most important to the assessment of the effects of gender stereotypes, however, was the extent to which target gender would affect ratings of intensity of emotional experience and emotional expression. The most interesting question was whether female targets would be rated as experiencing and expressing their emotions more intensely than male targets even though the emotion scenarios were exactly the same for both targets. This type of main effect for target gender would provide strong evidence for the influence of gender stereotypes of emotion, especially as they apply to the idea of women as over-reacting to emotional events.

Locus of Causality

With regard to attributions, it was again expected that emotions would be attributed to external factors to a greater extent than internal factors. On the basis of the content of gender stereotypes, it also was hypothesized that causality for female targets' emotions would be attributed more to internal factors than would male targets' emotions. This prediction was based on the stereotypic belief that women are dispositionally more emotional than men. This effect would be revealed by an interaction between target

gender and attribution type. However, given the stronger association of anger with men, it seemed possible that the reverse pattern might occur for the specific emotion of anger; that is, internal ratings would be higher for males in the case of anger.

Intensity of the emotional reaction also was expected to affect explanations of emotions in terms of locus of causality, such that intense emotional reactions would be attributed more to internal factors. More interesting to explore, however, was the extent to which intensity would qualify the possible gender effects. For example, would all of the female targets' emotions be attributed more internally, or just the intense ones? Especially interesting were the conditions in which the target was described as reacting in a stereotype-inconsistent manner; for example, when a male was described as having an intensely sad or anxious reaction and when a female was described as having a mildly sad or anxious reaction. Although prior research has suggested that, in general, stereotype-inconsistent behaviour often is attributed to external factors (Jackson, Sullivan, & Hodge, 1993), it remained uncertain what the outcome might be in the case of emotions.

Appropriateness

Because the match between intensity of the eliciting trigger and intensity of the emotional response was being manipulated in this study, certain predictions based on these factors were apparent. That is, it was expected that mild and intense responses which were lower and higher in intensity than the trigger would be rated as less appropriate (as greater under- or over-reactions) than moderate responses which objectively matched the trigger. However, the critical question here really concerned the extent to which gender would affect these ratings. For example, when a male target and a female target both were described as having intense emotional responses, would both be

rated as demonstrating over-reactions to the same degree? The same question may be posed for the conditions in which a male target and a female target were described as experiencing mild emotional reactions. In each of these cases there was a mismatch between the trigger (which was moderate) and the response (which was an over-reaction or an under-reaction), but a male's over-reaction and a female's under-reaction contradict the general emotional stereotype and thus may be rated as more extreme over- and under-reactions, respectively.

Consensus

The consensus questions concerned the extent to which it was expected that others would react the same as the target given the same circumstances. Again, because the match between the intensity of the trigger and the intensity of the response was being manipulated in this study, certain predictions based on these factors were apparent. That is, lower rated consensus was expected for mild and intense emotional responses that were objectively lower or higher in intensity than the eliciting event. Thus, it was expected that for mild responses, others would be rated as experiencing and expressing more emotion, for moderate responses others would be rated as experiencing and expressing the same amount of emotion, and for intense responses others would be rated as experiencing and expressing less emotion. However, the critical question again concerned the extent to which gender would affect these ratings. The present design allowed this issue to be explored while taking into account intensity of the response and emotion domain (experience vs. expression).

Control

Several straight-forward predictions were advanced regarding perceived control

over emotions. First, it was hypothesized that emotional experiences would be rated as less controllable than emotional expressions. This effect would be revealed by a main effect for emotion domain. Second, it seemed reasonable to expect that intense emotional reactions would be rated as less controllable than mild emotional reactions. This effect would be revealed by a main effect for response intensity. More interesting, however, was the question of whether the emotional experiences and expressions of female targets would be perceived as less controllable than those of male targets as would be predicted on the basis of gender stereotypes. This type of main effect would provide additional evidence concerning the influence of gender stereotypes of emotion. Before turning to the method used to investigate the hypotheses for Study 3, however, the pre-test that was conducted to assist in the construction of the necessary emotion scenarios is detailed first.

Pre-Test

The materials for Study 3 were based on the emotion descriptions provided in Study 1 and objectively evaluated in Study 2. Recall that the descriptions provided by the participants in Study 1 underwent only minor alterations in order to prepare them for use in Study 2. This was because the purpose of Study 2 was to obtain objective ratings of the emotions as they were reported. However, based on the ratings from the Study 2 questionnaire and the comments from the PEQ, very few of the descriptions appeared to be in a format that was appropriate for direct use in Study 3. That is, due to factors such as grammatical inconsistencies, idiosyncratic situations, and brevity of the descriptions (e.g., many participants in Study 2 commented that greater detail in the descriptions would have made them clearer or easier to understand), the emotion reports from Study 1 were not used verbatim in Study 3. Instead, after careful consideration of all of the

emotion descriptions, two gender-neutral emotion scenarios were created for each emotion type, as described below.

The main purpose of the pre-testing phase of Study 3 was to obtain intensity and appropriateness ratings for the emotion scenarios. More specifically, pre-testing was carried out to ensure that the triggers were of approximately equal intensity for each of the four emotions, and that the responses created were considered to be under-, over-, and appropriate reactions. In addition, it was very important that male and female participants not differ in their perceptions of the situations, because this of course could have affected subsequent ratings when gender was factored back into the descriptions. Based on the pre-testing, one scenario for each emotion was chosen for use in the main part of Study 3. Given that the pre-test phase was designed to be descriptive in nature, discussion of the results is limited to that which affected selection of scenarios.

Materials

Scenarios. The specific construction of hypothetical triggers took the following factors into consideration: first, the scenarios had to be realistic and believable; second, they had to be applicable to both male and female experiencers or targets (even though they would be presented in gender-neutral format for the pre-test); third, the triggers had to be such that they allowed for a reasonable range of possible responses, including under-, appropriate, and over-reactions; and finally, each trigger had to be reasonably represented among the descriptions provided in Study 1. For example, several participants in Study 1, both male and female, reported becoming angry in the context of friendship situations, several reported being anxious within the context of work situations, many reported being happy in romantic relationships, and many reported

sadness when friends or family left town or became ill. These kinds of triggers were reported at varying levels of intensity and generated varying types of responses, from very mild to very intense. Based on these and other kinds of generaliztions, two emotion triggers were created for each emotion type; thus, there were two descriptions for anger, two for anxiety, and so on.

It should be noted that one of the issues that became apparent in Study 2 was that for mildly to moderately intense triggers, few responses in those situations were considered "under-reactions" according to participant-observers. In other words, it seemed that ratings in the under-reaction category were rare when triggers were mild or moderate. This makes intuitive sense because, given a relatively mild emotional trigger, a matching response similarly would be mild and therefore appropriate. As a result, the emotion triggers created for pre-testing were designed to elicit ratings of "relatively" moderate intensity, meaning that they would be neither very mild nor very intense, but at least slightly above the middle or exact moderate point of the intensity scale. This was done in order to be able to create responses that could be realistically considered under-reactions, moderate (appropriate) reactions, and over-reactions.

The three reactions to each scenario were created by considering the ratings of real responses in Study 2. These ratings provided many examples upon which the fictitious responses could be based. Again the goal was to create emotional responses that were realistic and applicable to both males and females. As a result, responses that could be considered very close to the gender stereotypes, such as the feminine response of crying and the masculine response of physical aggression, were not included in any of the responses.

All of the emotion triggers along with the three levels of response for each (mild, moderate, and intense) are presented in Appendix K; these are labelled Anger 1, Anger 2, Anxiety 1, Anxiety 2, Happiness 1, Happiness 2, Sadness 1, and Sadness 2. One of the anger scenarios was described as occurring within the context of a friendship relationship, and the other was described as occurring within the context of a work situation. The anxiety triggers involved a romantic break-up and a job-interview situation. The happiness triggers involved a potential romantic situation and the receipt of needed scholarship money. One of the sadness scenarios was about the illness of a well-liked older neighbour, and the other concerned a best friend leaving town for college. As previously noted, each of these was based at least loosely on real emotional experiences and expressions reported by participants in Study 1. All of the scenarios and accompanying questions were written in completely gender-neutral format for the pre-test; in this way ratings would parallel those obtained in Study 2.

Questionnaire Items. Recall that the main purpose of the pre-testing phase of Study 3 was to select one emotion scenario for each of the four emotion types. Pre-testing was carried out to ensure that the triggers were of approximately equal intensity for each of the four chosen triggers, that the responses created really could be considered under-, over-, and moderate reactions, and that male and female participants generally agreed in their ratings. Thus, as in Study 2, participants made separate ratings of the objective intensity of the emotion trigger and the appropriateness of the "actual" emotional response. Specifically, each trigger, which was labelled "Event" on the questionnaire, was followed by the same two questions that were asked about objective intensity in Study 2. That is, participants were asked to read about the event and then indicate the

intensity of emotion that would be most fitting to feel in that situation and the intensity of emotion that would be most fitting to show in that situation. On the following page was one of the emotional responses labelled "Response," and participants were asked to indicate the extent to which both the amount of emotion the person felt and the amount of emotion the person showed in that situation was a fitting reaction as compared to an under- or over-reaction. Thus, the questionnaire items were identical to those used in Study 2. A sample of the questionnaire (anger, mild response) is provided in Appendix L.

Participants

Participants for this study were 29 male and 33 female students who were recruited from Introductory Psychology classes at the University of Manitoba. As per the policy of the Department of Psychology, participants received experimental credits toward their class grades for participation.

Procedure

Participants completed the questionnaires in groups of up to 20 in a small classroom. Prior to beginning the study, informed consent was obtained (see Appendix D) and detailed written instructions were provided to participants and read aloud by the experimenter. With the exception of several small details, the instructions were the same as those used in Study 2 (see Appendix M). In this study, all participants responded to all eight emotion triggers (two each for each of the four emotions) in random order. However, each participant read and rated only one type of emotional response to each of the eight triggers. These also were randomly assigned, with the restriction that participants could not rate the same intensity of response for the same emotion type. For example, participants could not rate mild responses for both anger scenarios; instead, they

could rate one mild and one moderate response, or one mild and one intense response, or one moderate and one intense response for anger. The same restriction applied to the other three emotions. After responding to each of the eight scenarios, participants then filled out the same PEQ that was used in Study 2 (see Appendix H).

Results

PEQ Responses. As in Study 2, the PEQ responses were examined first in order to determine the extent to which the lack of reference to gender may have affected participants' ratings. In this study, only one participant mentioned anything about gender before being asked about it directly. Most of the comments in response to the first three items on the PEQ focussed on specific details of the scenarios. For example, several participants noted that some of the responses seemed quite intense or lacking in intensity. This, of course, was the point of creating the responses of differing intensities.

In response to the final item on the PEQ about whether they had any difficulty with the lack of reference to gender in the scenarios, nine participants (14.5%) indicated that they did. When asked to explain how this might have affected their responding, participants generally stated the stereotype; that is, they described how males and females tend to respond differently in terms of emotions. Overall, however, it appeared again that gender was not an overwhelming concern to participants, at least according to the PEQ responses.

Intensity and Appropriateness. Recall that the main purpose of the pre-test was to obtain a priori ratings of the triggers and responses, and to check for possible gender differences in responding. Therefore, the first stage in this process involved examining means for the intensity and appropriateness items for each of the scenarios and

comparing the responses of male and female participants. In order to simplify matters of presentation, the means for male and female participants for all of the items are presented in tables in Appendix N. Suffice it to state here that the analyses revealed that there was at least one scenario of each emotion type for which there were no participant gender differences in responding. The scenarios for which there were no gender differences in objective intensity or appropriateness ratings were Anger 1 (friend damaging computer), Anxiety 1 (job interview), Anxiety 2 (meeting former partner after painful break-up), Happiness 1 (desired romantic relationship), and Sadness 1 (death of an elderly well-liked neighbour). Because it was desirable to use scenarios for which there were no gender differences, these were chosen for use in Study 3. Although both of the anxiety scenarios met this criteria, Anxiety 2 eventually was selected because it appeared to be more representative of the kinds of situations that were reported by participants in Study 1. The overall means for objective intensity of feelings and displays elicited by the triggers for the four chosen scenarios are reported in Table 11.

Table 11

Study 3 Pre-Test – Mean Objective Intensity Ratings (and Standard Deviations) as a Function of Emotion Domain and Emotion Type

	Emotion Domain			
Emotion	Feeling		Display	
	M	(SD)	M	(SD)
Anger 1	6.63	(1.24)	5.55	(1.76)
Anxiety 2	6.19	(1.19)	3.18	(2.00)
Happiness 1	6.13	(1.15)	5.05	(1.14)
Sadness 1	5.35	(1.45)	4.89	(1.46)

Note. Higher scores indicate higher objective intensity.

These overall ratings show that intensity of feelings elicited by the scenarios tended to be rated between moderate and intense on the *0* to *8* intensity scales. As previously noted, the scenarios were specifically created to elicit these above-moderate ratings so that responses could be created which would be perceived as under-, appropriate, and over-reactions. As would be expected on the basis of the results from Studies 1 and 2, objective intensity of feeling always was rated as at least somewhat more intense than objective intensity of display.

Recall that after reading about the emotional trigger and rating the intensity of feeling and display elicited by it, participants then read about one of the emotional

responses and rated the appropriateness of the "actual" feeling and display. The means for appropriateness of feelings and displays are reported in Table 12.

Table 12

Study 3 Pre-Test – Mean Appropriateness Ratings as a Function of Emotion Domain and Emotion Type

	Emotion Domain			
Emotion	Feeling		Display	
	M	(SD)	M	(SD)
Anger 1				
Mild	-1.55	(1.37)	-2.36	(1.09)
Moderate	0.24	(0.94)	0.29	(1.06)
Intense	1.53	(1.81)	2.74	(1.52)
Anxiety 2				
Mild	-0.86	(1.04)	-0.41	(1.22)
Moderate	0.29	(1.01)	0.33	(0.66)
Intense	1.26	(1.69)	2.37	(1.26)
Happiness 1				
Mild	-0.42	(0.77)	-0.84	(1.01)
Moderate	0.27	(1.24)	0.50	(0.80)
Intense	1.52	(1.25)	2.33	(1.15)
Sadness 1				
Mild	-1.36	(1.18)	-1.50	(1.63)
Moderate	0.14	(1.01)	0.33	(1.20)
Intense	0.74	(1.28)	1.16	(1.12)

Note. Appropriateness ratings were made using scales that ranged from *extreme under-reaction* (-4), through *appropriate reaction* (0), to *extreme over-reaction* (+4). Thus, negative scores indicate ratings of under-reactions, positive scores indicate ratings of over-reactions, and scores close to zero indicate ratings of appropriate reactions.

Examination of the means in Table 12 for each emotion revealed the anticipated trend across response intensity. That is, mild reactions were rated as under-reactions (negative values), moderate reactions were rated as appropriate (close to zero), and intense reactions were rated as over-reactions (positive values). This trend is especially apparent for the emotion of anger. However, because the trend was somewhat less apparent for mild anxiety, mild happiness, and intense sadness reactions, these responses were modified slightly in order to make them more consistent with the desired types of reactions. The final versions of the four chosen scenarios and the accompanying responses are presented in Appendix O. Having now described the preparation of the materials for Study 3, the methodology employed in the main part of the study can be described.

Method

Design

The main part of Study 3 employed a 2 x 2 x 3 factorial design. The factors in this study included: (a) participant gender, (b) target gender, and (c) response intensity (over-reaction, appropriate reaction, and under-reaction), which were all between-participants factors. In addition, all participants responded to each emotion type (anger, anxiety, happiness, and sadness). However, emotion type could not be included as a factor in the analyses because participants responded to different intensities for each emotion type.

Materials

Scenarios. The materials for this study consisted of the four emotion scenarios created as part of the pre-test. There were three responses to each of the emotion triggers, and these were designed to represent under-reactions, moderate or matching reactions,

and over-reactions. As previously noted, the four emotion triggers and accompanying responses are presented in Appendix O.

Questionnaire Items. The questionnaire employed in Study 3 was very similar to the one employed in Study 1, and the same types of scale items were used. Appendix P provides an example of the questionnaire for a female target's mild anger. Of course, in this study, participants first had to read about the target's emotion and how he or she came to feel that way. This was done by indicating to participants that the person they were reading about simply was asked to provide a description of a time when he or she felt a particular emotion (anger, anxiety, happiness, or sadness). Participants then read about the trigger and the response and provided ratings of intensity, locus of causality, appropriateness, consensus, and control for experience. Next, participants were asked to focus on emotional display and provided ratings of intensity, appropriateness, consensus, and control for expression (see Appendix P).

Post-Experimental Questionnaire. After responding to all of the items, participants were asked to complete a PEQ in order to assess their interpretations of the study and to determine if any participants became aware of the true nature of the materials (see Appendix Q). The first three items on the questionnaire were similar to those used on the PEQ for Study 2 and the pre-test. That is, participants were asked if they had any questions or comments about the study, if there was anything that would have made the descriptions more realistic or easier to understand, and if anything struck them as unusual or not quite right as they read through the descriptions.

The remaining items on the PEQ were similar to those used in Study 1. One item simply asked if participants had any difficulty answering the rating scale items about the

emotions. The final items asked if participants were able to separate their thinking about how the person felt the emotion from their thinking about how the person showed the emotion, and if they had any particular ideas about how they were supposed to respond when they were asked the same questions twice for each emotion. As in Study 1, the options for this demand characteristics item included "I thought I was supposed to respond the same to both sets of questions," "I thought I was supposed to respond differently to the sets of questions," and "I didn't really think about how I was supposed to respond – I just answered the questions" (see Appendix Q).

Procedure

Participants were run in groups of up to 20 in a small classroom. Seating was arranged to ensure privacy. An Introduction sheet was provided to participants and read aloud by the experimenter (see Appendix R). Similar to the procedure employed in the prior studies, the introduction informed participants about the nature of the study and the manner in which they should approach the experimental task. More specifically, the introduction informed participants that they would be responding to four *randomly chosen* emotions reported by four *different* participants from a previous study. They also were told that the emotions were not related to one another in any way. Informed consent was requested using standardized consent forms (see Appendix D).

Each participant responded to all of the four emotion types, and target gender was a between-participants factor so that each participant read about only male or only female targets for the four emotions. Participants were randomly assigned to the mild, moderate, or intense level of the response intensity factor for each emotion type, with the restriction that they not encounter any one intensity more than twice. As in Study 1, order of

emotion presentation was completely randomized across participants. Participants completed the experimental task at their own pace and then completed the PEQ. Information forms describing the purpose and results of the study were made available to all participants once the data collection and analysis phase was complete (see Appendix S).

Participants

Participants for this study were 91 male and 92 female participants who were recruited from Introductory Psychology classes at the University of Manitoba. This was an adequate sample size given that an a priori sample size analysis suggested that a minimum sample of 72 male and 72 female participants would provide sufficient power (minimum power = .87) to detect both main effects and interactions of moderate magnitude (effect size = .30) for the most critical variables of participant gender, target gender, and response intensity (Borenstein & Cohen, 1988).

Separate sign-up booklets were used in order to approximate equal numbers of male and female participants. Space was provided for up to 20 participants to sign up for any one session, with room for 10 males and 10 females. As per the policy of the Psychology Department at the University of Manitoba, participants received experimental credits toward their class grades for participation.

Upon inspection of the completed questionnaires, the data from two male participants were eliminated from the data analyses because of the manner in which they responded to the appropriateness and consensus questions. Specifically, these participants interpreted the question as requiring some type of rank ordering of the response items rather than the selection of the one response that was perceived to best fit the description.

As a result of the large number of responses that could not be interpreted from these participants, all of their data were excluded from the final analyses. Thus, the final sample consisted of 89 male and 92 female participants. Nine of the participants whose data remained in the analyses missed one item somewhere on the questionnaire for unknown reasons. This missing data accounts for variations among the degrees of freedom reported in the analyses.

Analyses

Recall that in the procedure for this study, participants responded to only one target gender but to a different intensity of response for each emotion type. So, for example, a participant may have responded to mild anger, moderate anxiety, intense happiness, and mild sadness for male or for female targets. As a result, emotion type could not be used as a factor in the analyses because response intensity was different for each emotion type. Thus, analyses for each of the theoretical categories (intensity, attributions, appropriateness, consensus, and control) were conducted separately for each emotion type. Analyses are reported according to the theoretical categories in the same manner as the hypotheses. Again, due to the relatively large number of statistical tests that were conducted, the more conservative critical alpha level of $p < .01$ was observed. In addition, effect sizes are reported as appropriate. Finally, responses to the PEQ items were examined in order to determine the manner in which participants responded to the experimental task.

Intensity of Experience and Expression

Because intensity was measured both for experience and expression, emotion domain was made a factor in the intensity analyses. Thus, intensity was analyzed using a

series of 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity: Under, Appropriate, Over x Emotion Domain: Experience, Expression) ANOVAs for each emotion type. Main effects for response intensity were expected such that intense responses would be rated as more intense than moderate responses which would be rated as more intense than mild responses. In addition, main effects for emotion domain were expected, such that emotional experiences would be rated as more intense than emotional expressions. Main effects for target gender would provide evidence that the emotions of females are judged to be different from the emotions of males despite being objectively equal.

Four 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity x Emotion Domain) ANOVAs were conducted for intensity of feeling and display for each emotion type. The expected main effect for response intensity was significant for all four emotions: anger, $F\,(2, 169) = 178.67, p < .001$; anxiety, $F\,(2, 169) = 131.41, p < .001$; happiness, $F\,(2, 168) = 112.54, p < .001$; and sadness, $F\,(2, 169) = 158.22, p < .001$. These findings indicated that the responses created to be of differing intensities were in fact perceived to differ in intensity, and estimates of effect size revealed the magnitude of the effect to be large for each emotion ($\eta^2 = .68$ for anger, $\eta^2 = .61$ for anxiety, $\eta^2 = .57$ for happiness, and $\eta^2 = .65$ for sadness). The relevant descriptive statistics are shown in Table 13.

Table 13

Study 3 - Mean Intensity Ratings (and Standard Deviations) as a Function of Emotion Type, Response Intensity, and Emotion Domain

Emotion	Emotion Domain					
	Feelings		Displays		Combined	
	M	(SD)	M	(SD)	M	(SD)
Anger						
Mild	5.02	(1.84)	1.81	(1.52)	3.41	(1.33)
Moderate	5.96	(1.40)	5.05	(1.75)	5.50	(1.32)
Intense	7.36	(0.82)	7.39	(0.95)	7.38	(0.73)
Anxiety						
Mild	4.69	(1.86)	2.16	(1.55)	3.43	(1.37)
Moderate	5.95	(1.36)	5.16	(1.58)	5.56	(1.23)
Intense	7.50	(0.71)	6.50	(1.34)	7.00	(0.89)
Happiness						
Mild	5.21	(1.44)	2.86	(1.80)	4.05	(1.34)
Moderate	6.55	(1.14)	5.18	(1.93)	5.87	(1.28)
Intense	7.39	(0.88)	7.02	(1.09)	7.20	(0.81)
Sadness						
Mild	3.56	(1.63)	2.13	(1.69)	2.84	(1.52)
Moderate	5.70	(1.28)	4.48	(1.64)	5.09	(1.19)
Intense	7.03	(1.27)	6.81	(1.25)	6.92	(0.95)

Note. Higher scores indicate higher intensity ratings.

Post hoc comparisons with a Bonferroni correction revealed that, for all emotions, combined ratings for mild, moderate, and intense responses differed significantly from one another such that mild responses were rated as the most mild, intense responses were rated as the most intense, and moderate responses were rated in between (all p's $< .001$). Further examination of the mean values in Table 13 indicated that for feelings, even the mild responses were rated as at least moderate in magnitude (near a value of 4 or above on the *0* to *8* scales). This is not surprising given that the triggers were designed to elicit moderate or above-moderate ratings of feelings so that realistic under-, over- and appropriate reactions could be created. Examination of the mean ratings for displays confirmed this manipulation (see Table 13).

The series of 2 x 2 x 3 x 2 ANOVAs also revealed the expected main effect for emotion domain for all four emotions: anger, $F(1, 169) = 121.64, p < .001$; anxiety, $F(1, 169) = 130.72, p < .001$; happiness, $F(1, 168) = 134.85, p < .001$; and sadness, $F(1, 169) = 66.98, p < .001$. These results indicated that ratings of intensity differed for experience versus expression of emotion. However, all of these effects were qualified by significant interactions between response intensity and emotion domain: anger, $F(2, 169) = 61.47, p < .001$; anxiety, $F(1, 169) = 18.74, p < .001$; happiness, $F(2, 168) = 22.91, p < .001$; and sadness, $F(2, 169) = 10.30, p < .001$. Effect size estimations for these interactions were of small to moderate magnitude ($\eta^2 = .42$ for anger, $\eta^2 = .18$ for anxiety, $\eta^2 = .21$ for happiness, and $\eta^2 = .11$ for sadness).

Follow-up paired comparisons for anger, happiness, and sadness revealed that for mild and moderate response intensities, feelings were rated as more intense than displays. Specifically, for mild anger, M's = 5.02 vs.1.81, $t(62) = 12.33, p < .001$, and for

moderate anger, *M's* = 5.96 vs. 5.05, t (56) = 3.92, $p < .001$; for mild happiness, *M's* = 5.21 vs. 2.86, t (57) = 9.53, $p < .001$, and for moderate happiness, *M's* = 6.55 vs. 5.18, t (59) = 5.69, $p < .001$; for mild sadness, *M's* = 3.56 vs. 2.13, t (60) = 8.51, $p < .001$, and for moderate sadness, *M's* = 5.70 vs. 4.48, t (60) = 5.56, $p < .001$. However, the differences between ratings of feelings and displays for intense responses were not significant. For anxiety, follow-up tests revealed that feeling was rated as more intense than display for all levels of intensity: for mild responses, *M's* = 4.69 vs. 2.16, t (60) = 9.64, $p < .001$; for moderate responses, *M's* = 5.95 vs. 5.16, t (61) = 3.79, $p < .001$; and for intense responses, *M's* = 7.50 vs. 6.50, t (57) = 6.35, $p < .001$. Thus, as expected, feelings were rated as more intense than displays of emotion except for intense anger (*M's* = 7.36 and 7.39), intense happiness (*M's* = 7.39 and 7.02), and intense sadness responses (*M's* = 7.03 and 6.81); in these cases, feelings and displays were rated as equally intense.

Only the ANOVA for happiness revealed any further significant effects for ratings of intensity of experience and expression. Specifically, the 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity x Emotion Domain) ANOVA for intensity of happiness feelings and displays revealed a significant 3-way interaction between participant gender, target gender, and emotion domain, F (1, 168) = 10.81, $p < .001$, $\eta^2 = .06$. The relevant means are shown in Table 14.

Table 14

Study 3 - Mean Intensity Ratings (and Standard Deviations) for Happiness as a Function of Participant Gender, Target Gender, and Emotion Domain

	Emotion Domain			
Gender	Feeling		Display	
	M	(SD)	M	(SD)
Male Participants				
Male Targets	6.51	(1.54)	5.38	(2.24)
Female Targets	6.50	(1.31)	4.48	(2.44)
Female Participants				
Male Targets	6.31	(1.48)	4.92	(2.36)
Female Targets	6.30	(1.55)	5.41	(2.37)

Note. Higher scores indicate higher intensity ratings.

In order to explore the nature of the 3-way interaction, separate 2 x 2 (Participant Gender x Target Gender) ANOVAs for feelings of happiness and for displays of happiness were performed. These analyses revealed only a marginally significant 2-way interaction between participant gender and target gender for displays of happiness, F (3, 177) = 4.00, $p < .047$. However, paired comparisons revealed no significant differences among the means, making it difficult to explain the interaction. Although inspection of the means revealed male participants appear to have rated male targets' displays of happiness as more intense than female targets' displays, whereas female participants appear to have rated female targets' displays of happiness as more intense than male

targets' displays, this observation must remain speculative. Given that the effect size for the 3-way interaction was very small ($\eta^2 = .06$), it did not seem especially important to pursue interpretation of this interaction. Note that no other significant effects relating to gender were found for any of the emotions; thus, it would appear that males and females were not perceived to differ in the intensity of their emotional feelings or displays.

Locus of Causality

Perceptions of locus of causality were analyzed by making attribution type a factor in the analyses and using a series of 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity: Under, Appropriate, Over x Attribution Type: Internal, External) ANOVAs. Main effects for attribution type and for response intensity were expected such that attributions to external factors would exceed attributions to internal factors, and intense emotional reactions would be attributed more to internal factors than would more mild emotional reactions. On the basis of the content of gender stereotypes, interactions between target gender and attribution type were expected such that, overall, the emotions of female targets more than those of male targets would be attributed to internal factors.

Four 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity x Attribution Type) ANOVAs were conducted for internal and external attributions for each emotion type. The expected main effect for attribution type was significant for all four emotions: anger, $F(1, 169) = 199.39, p < .001$; anxiety, $F(1, 169) = 26.23, p < .001$; happiness, $F(1, 169) = 68.93, p < .001$; and sadness, $F(1, 169) = 67.34, p < .001$. These results indicated that ratings differed for internal versus external attributions for emotion. The relevant means are shown in Table 15.

Table 15

Study 3 - Mean Attribution Ratings (and Standard Deviations) as a Function of Emotion Type, Response Intensity, and Attribution Type

Emotion	Attribution Type					
	Internal		External		Combined	
	M	(SD)	M	(SD)	M	(SD)
Anger						
Mild	3.38	(2.36)	6.92	(1.61)	5.15	(1.43)
Moderate	3.91	(2.52)	7.21	(1.25)	5.56	(1.34)
Intense	5.11	(2.44)	7.21	(7.21)	6.16	(1.33)
Anxiety						
Mild	4.39	(1.96)	5.31	(2.13)	4.85	(1.56)
Moderate	4.73	(2.08)	6.23	(1.81)	5.48	(1.34)
Intense	5.48	(2.17)	6.38	(1.86)	5.93	(1.27)
Happiness						
Mild	4.68	(2.10)	6.15	(1.60)	5.41	(1.41)
Moderate	5.20	(1.79)	6.20	(1.78)	5.70	(1.32)
Intense	4.50	(2.25)	6.89	(1.63)	5.69	(1.37)
Sadness						
Mild	3.57	(2.29)	5.18	(2.45)	4.38	(1.71)
Moderate	3.30	(2.54)	6.36	(2.05)	4.83	(1.74)
Intense	4.98	(2.41)	6.02	(2.06)	5.50	(1.62)

Note. Higher scores indicate higher attribution ratings.

Inspection of the means in Table 15 revealed that in all cases external attributions for emotion were greater than internal attributions, and estimates of effect size indicated that these effects ranged from small magnitude for anxiety to large magnitude for anger ($\eta^2 = .54$ for anger, $\eta^2 = .13$ for anxiety, $\eta^2 = .29$ for happiness, and $\eta^2 = .29$ for sadness). Closer examination of the mean values in Table 15 further revealed that, whereas ratings for internal attributions varied around the mid-point of the scale (range = 3.30 to 5.48), ratings for external attributions were closer to the high end of the scale (range = 5.31 to 7.21). Thus, it would appear that internal factors were seen as moderately contributing to emotional responses, and external factors were seen as very much contributing to emotional responses.

The 2 x 2 x 3 x 2 ANOVAs also revealed a main effect for response intensity for three of the four emotions: anger, $F(2, 169) = 8.85$, $p < .001$, $\eta^2 = .10$; anxiety, $F(2, 169) = 8.84$, $p < .001$, $\eta^2 = .10$; and sadness, $F(2, 169) = 6.55$, $p < .002$, $\eta^2 = .07$. The effect was not, however, significant for happiness. These findings indicated that the responses created to be of differing intensities differed in terms of combined attribution ratings, at least for three out of the four emotions. Post hoc comparisons with a Bonferroni correction revealed that for anger, combined attributions for intense reactions ($M = 6.16$) were greater than those for mild and moderate reactions ($M's = 5.15$ and 5.56); for anxiety, combined attributions for both moderate and intense reactions ($M's = 5.48$ and 5.93) were greater than those for mild reactions ($M = 4.85$); and for sadness, combined attributions for intense responses ($M = 5.50$) were greater than those for mild ($M = 4.38$) but not moderate ($M = 4.83$) responses (all $p's < .001$). However, the main effects were qualified by at least marginally significant interactions between response intensity and

attribution type for two of the four emotions: anger, F (2, 169) = 4.61, $p < .011$, and sadness, F (2, 169) = 6.82, $p < .001$. Although these interactions were of small magnitude ($\eta^2 = .07$ or less), they indicated that attribution ratings may differ across response intensity for these emotions. As a result, separate post-hoc comparisons for attribution type were conducted to further investigate the nature of the interactions.

Post hoc comparisons for attribution ratings for each attribution type revealed that for anger, the intensity effect applied only to internal attributions, with intense responses ($M = 5.11$) being rated as more internal than mild or moderate responses ($M's = 3.38$ and 3.91). External attributions for anger did not differ across emotion type. For sadness, the intensity effect applied both to internal and external attributions, with intense responses being rated as more internal ($M = 4.98$) than either mild or moderate responses ($M's$ = 3.57 and 3.30), and moderate responses being rated as more external ($M = 6.36$) than mild responses ($M = 5.18$). There were no differences in attribution ratings across response intensity for the emotion of happiness (see Table 15). Very generally, then, and with the exception of external attributions for anger and both internal and external attributions for happiness, the overall pattern of results suggests that when a more intense response is described as accompanying a moderate emotion trigger, more attributions, both internal and external are made. That is, greater overall attributions tend to accompany emotions of greater intensity. For happiness, however, attribution ratings were quite consistent across response intensity, and for anger, external attributions were consistently high across response intensity. Note that none of the expected interactions between target gender and attribution type were found.

anger and $\eta^2 = .10$ for happiness), follow-up paired comparisons for each emotion for each level of intensity were conducted to examine the nature of the interactions. These analyses revealed differing patterns across the emotions.[5] For anger, the appropriateness ratings differed across experience and expression for the mild, moderate, and intense responses; for mild responses, *M's* = -1.10 vs. –1.97, t (62) = 4.50, $p < .001$; for moderate responses, *M's* = 0.25 vs. -0.18, t (56) = 2.66, $p < .01$; and for intense responses, *M's* = 2.00 vs. 2.43, t (60) = -2.87, $p < .006$. These results indicated that displays were rated as under-reactions to a greater extent than were feelings for mild and moderate anger responses, and that displays were rated as over-reactions to a greater extent than were feelings for intense anger responses. For anxiety, appropriateness ratings differed across experience and expression for mild and intense responses; for mild responses, *M's* = -.23 vs. -0.98, t (60) = 5.26, $p < .001$; and for intense responses, *M's* = 2.02 vs. 1.48, t (57) = 3.66, $p < .001$. These results indicated that displays were rated as under-reactions to a greater extent than were feelings for mild anxiety responses, and feelings were rated as over-reactions to a greater extent than were displays for intense anxiety responses. For happiness, a difference in ratings of experience and expression occurred only for mild responses, *M's* = -0.44 vs. -1.08, t (58) = 5.35, $p < .001$, such that displays were rated as under-reactions to a greater extent than were feelings. Examination of the means in Table 16 indicated that many of these differences were very small in size and differences therefore should be interpreted as relative. No effects due to gender were found in any of the analyses.

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[5] For the sake of consistency, ratings for anxiety, for which there was a significant main effect but no interaction, were examined in the same fashion as the interactions.

Consensus

Perceptions of consensus were analyzed using the same type of 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity x Emotion Domain) ANOVAs as in the previous analyses. Recall that the consensus questions asked about the extent to which others would experience and express emotion in the given situation; that is participants were asked to indicate whether others would feel and show less, the same amount, or more emotion than the person in the scenario. It was expected that for mild responses others would be rated as experiencing and expressing more emotion, for moderate responses others would be rated as experiencing and expressing the same amount of emotion, and for intense responses others would be rated as experiencing and expressing less emotion. Again, the extent to which gender had an effect on these ratings was explored.

Four 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity x Emotion Domain) ANOVAs were conducted for consensus for each emotion type. A main effect for response intensity was significant for all four emotions: anger, F (2, 169) = 84.89, $p < .001$; anxiety, F (2, 169) = 71.61, $p < .001$; happiness, F (2,169) = 75.67, $p < .001$; and sadness, F (2, 169) = 77.87, $p < .001$. These findings indicated that the responses created to be of differing intensities differed in terms of consensus ratings. Estimates of effect size revealed that these effects were of relatively large magnitude (anger $\eta^2 = .50$, anxiety $\eta^2 = .46$, happiness $\eta^2 = .47$, sadness $\eta^2 = .48$). The relevant means are shown in Table 17.

Table 17

Study 3 – Mean Consensus Ratings (and Standard Deviations) as a Function of Emotion Type, Response Intensity, and Emotion Domain

Emotion	Emotion Domain					
	Feelings		Displays		Combined	
	M	(SD)	M	(SD)	M	(SD)
Anger						
Mild	1.13	(1.46)	1.79	(1.40)	1.46	(1.23)
Moderate	0.42	(1.12)	0.79	(1.24)	0.61	(1.07)
Intense	-1.33	(1.54)	-1.56	(1.64)	-1.44	(1.48)
Anxiety						
Mild	0.90	(1.06)	1.44	(1.06)	1.17	(0.92)
Moderate	0.05	(0.89)	0.15	(0.87)	0.10	(0.79)
Intense	-0.88	(1.17)	-0.78	(1.16)	-0.83	(1.04)
Happiness						
Mild	1.07	(1.03)	1.51	(1.01)	1.29	(0.89)
Moderate	0.08	(0.81)	0.27	(0.88)	0.18	(0.76)
Intense	-0.39	(0.84)	-0.63	(1.09)	-0.51	(0.81)
Sadness						
Mild	0.79	(1.10)	0.95	(1.31)	0.87	(1.08)
Moderate	-0.16	(0.76)	-0.13	(0.87)	-0.15	(0.70)
Intense	-1.31	(1.13)	-1.31	(1.10)	-1.31	(1.04)

Note. Consensus ratings were made using scales that ranged from "most others would feel (or display) very much *less* emotion" (-4), through "most others would feel (or display) the *same* amount of emotion" (0), to "most others would feel (or display) very much *more* emotion" (+4). Thus, both negative and positive scores indicate ratings of low consensus, with others being estimated as experiencing more or less of the emotion. In contrast, scores near zero indicate ratings of high consensus.

Post hoc comparisons for consensus ratings revealed that, for all emotions, combined ratings for mild, moderate, and intense responses differed significantly from one another such that mild responses elicited ratings that others would feel and show more emotion (positive scores), moderate responses elicited ratings that others would feel and show the same amount of emotion (near zero), and intense responses elicited ratings that others would feel and show less emotion (negative ratings) (all p's $< .001$). Further examination of the mean values in Table 17 revealed that, in general, mild responses elicited ratings that others would feel and show "slightly" to "moderately" more emotion (near +1 or +2 on the scale), whereas the intense responses elicited ratings that others would feel and show "slightly" to "moderately" less emotion (near -1 or -2 on the scale). Ratings for moderate responses all were close to zero on the scale, with the exception of ratings for displays of moderate anger which were closer to the point on the scale indicating that others would show more anger in that situation.

The 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity x Emotion Domain) ANOVAs also revealed a main effect for emotion domain for two of the four emotions: anger, F (1, 169) = 8.39, $p < .004$, and anxiety, F (1, 169) = 11.66, $p < .001$. These effects indicated that ratings of consensus differed for experience versus expression of emotion. However, these effects were qualified by significant interactions between response intensity and emotion domain for three of the four emotions: anger, F (2, 169) = 8.61, $p < .001$; anxiety, F (1, 169) = 3.98, $p < .021$; and happiness, F (2, 169) = 7.78, $p < .001$. None of these effects were significant for the emotion of sadness. Although estimates of effect size again revealed the interactions to be of small magnitude (anger $\eta^2 = .09$, anxiety $\eta^2 = .05$, happiness $\eta^2 = .08$), follow-up comparisons were

performed to examine the nature of these effects.

Follow-up paired comparisons for each emotion for each level of response intensity revealed slightly different patterns across the three emotions. Specifically, for anger, the consensus ratings differed across experience and expression for the mild and moderate responses (*M's* = 1.13 vs. 1.79, t (62) = -3.55, $p < .001$, and *M's* = 0.42 vs. 0.79, t (56) = -2.80, $p < .007$, respectively). Inspection of the means revealed that the values were more extreme for displays than for feelings, indicating that in terms of consensus, participants thought that others would feel, but would especially display, more emotion than the targets in the scenarios. For anxiety, consensus ratings differed across experience and expression only for mild responses (*M's* = 0.90 vs. 1.44, t (60) = -3.99, $p < .001$), with others again expected to display even more emotion than they would feel. For happiness, a difference in ratings of experience and expression occurred only for mild responses (*M's* = 1.07 vs. 1.51, t (58) = -3.43, $p < .001$), with others again expected to display even more emotion than they would feel. Thus, it would appear that when mild responses are described as accompanying more intense emotional triggers, others are expected to feel, but particularly to display, more emotion than the experiencer. The pattern did not, however, hold for the emotion of sadness. Again, no effects due to gender were found in any of the analyses.

Control

Control ratings were analyzed using the same type of 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity x Emotion Domain) ANOVAs. Main effects for emotion domain and response intensity were expected such that emotional experiences would be rated as less controllable than emotional expressions, and intense

responses would be rated as less controllable than mild responses. A main effect for target gender, with the experiences and expressions of females rated as less controllable than those of males, would confirm the gender stereotype.

Four 2 x 2 x 3 x 2 (Participant Gender x Target Gender x Response Intensity x Emotion Domain) ANOVAs were conducted for control over feelings and displays for each emotion type. The expected main effect for emotion domain was significant for all four emotions: anger, $F(1, 167) = 19.73, p < .001$; anxiety, $F(1, 166) = 27.33, p < .001$; happiness, $F(1, 168) = 15.20, p < .001$; and sadness, $F(1, 167) = 11.82, p < .001$. These results indicated that ratings of control differed for experience versus expression of emotion. The relevant means are shown in Table 18.

Table 18

Study 3 – Mean Control Ratings (and Standard Deviations) as a Function of Emotion Type, Response Intensity, and Emotion Domain

Emotion	Emotion Domain					
	Feelings		Displays		Combined	
	M	(SD)	M	(SD)	M	(SD)
Anger						
Mild	5.86	(1.90)	6.59	(1.61)	6.22	(1.27)
Moderate	4.67	(1.95)	5.65	(1.81)	5.16	(1.65)
Intense	3.32	(2.52)	3.78	(2.84)	3.55	(2.50)
Anxiety						
Mild	5.61	(1.93)	6.13	(1.68)	5.87	(1.54)
Moderate	4.13	(2.16)	5.10	(1.82)	4.62	(1.81)
Intense	3.16	(2.32)	3.96	(2.28)	3.56	(2.04)
Happiness						
Mild	6.02	(1.69)	6.49	(1.45)	6.25	(1.16)
Moderate	4.98	(2.33)	5.59	(1.88)	5.29	(1.75)
Intense	3.71	(2.05)	4.58	(2.04)	4.14	(1.70)
Sadness						
Mild	4.97	(2.05)	5.93	(1.76)	5.45	(1.56)
Moderate	4.83	(1.75)	4.80	(1.75)	4.82	(1.53)
Intense	3.32	(2.10)	3.85	(2.07)	3.58	(1.88)

Note. Higher scores indicate higher ratings of control.

Inspection of the means in Table 18 revealed that, in general, targets were perceived as being more in control of their displays of emotion than their feelings of emotion, although estimates of effect size suggested that these were effects of small magnitude (anger $\eta^2 = .11$, anxiety $\eta^2 = .14$, happiness $\eta^2 = .08$, sadness $\eta^2 = .07$).

The four 2 x 2 x 3 x 2 ANOVAs for control also revealed the expected main effect for response intensity for all four emotions: anger, $F(2, 167) = 32.45, p < .001$; anxiety, $F(2, 166) = 23.11, p < .001$; happiness, $F(2, 168) = 28.79, p < .001$; and sadness, $F(2, 167) = 19.04, p < .001$. These findings indicated that the responses created to be of differing intensities were perceived to differ in terms of control, and estimates of effect size revealed these results to be of approximately moderate magnitude (anger $\eta^2 = .28$, anxiety $\eta^2 = .22$, happiness $\eta^2 = .26$, sadness $\eta^2 = .19$). Post hoc comparisons with a Bonferroni correction revealed a nearly consistent pattern for control across response intensity for the four emotions. Specifically, ratings for mild, moderate, and intense responses differed significantly from one another such that targets were perceived as being most in control of mild responses and least in control of intense responses, with moderate responses being rated in-between (all p's $< .006$). This, of course, was the expected pattern. The results were somewhat different only for the emotion of sadness, for which targets were perceived as being more in control of mild and moderate responses than intense responses, but control ratings did not differ between mild and moderate responses. Nonetheless, the patterns of means all are in the expected direction for ratings of control, with targets being rated as more in control of mild feelings and displays of emotion and less in control of intense feelings and displays (see Table 18).

The only other significant effect revealed by the ANOVAs was a 3-way

Participant Gender x Target Gender x Response Intensity interaction for the emotion of happiness, F (2, 168) = 5.01, $p < .008$, $\eta^2 = .06$. The relevant means are reported in Table 19.

Table 19

Study 3 – Mean Control Ratings for Happiness as a Function of Response Intensity, Participant Gender, and Target Gender

	Male Participants		Female Participants	
	Male Targets	Female Targets	Male Targets	Female Targets
	M (SD)	M (SD)	M (SD)	M (SD)
Combined Feelings & Displays				
Mild	5.73	6.43	6.57	6.30
Moderate	5.19	4.46	5.19	6.17
Intense	3.66	4.73	4.38	3.79

Note. Higher scores indicate higher ratings of control.

In order to investigate the nature of the 3-way interaction, separate 2 x 2 (Participant Gender x Target Gender) ANOVAs were conducted for each level of response intensity. These ANOVAs revealed no significant effects at $p < .01$; in fact, there were no significant effects at $p < .05$. Given the small effect size for the interaction ($\eta^2 = .06$), interpretation of the 3-way interaction was not pursued.

PEQ Responses

After completing the emotion questionnaires, participants responded to a PEQ which was designed to obtain information about their perceptions of the experimental task (see Appendix Q). On this questionnaire, participants first were asked if they had any questions or comments about the study. A total of 34 participants (18.8%) wrote something in response to this item, and these responses were equally distributed across the categories of participant gender and target gender. In general, many of the responses to this item were comments on how straight-forward the study was, how it was interesting, and other such positive observations about the methodology. Five participants did, however, mention having difficulties with some of the rating scale questions. Specifically, one participant stated generally that some of the questions were worded oddly, and one participant mentioned having a lot of "what if" questions in mind when answering the questions. In addition, one participant reported having difficulty with the consensus items and another participant reported having difficulty with the control items. Finally, one participant did not like the scales that ranged from *-4* to *+4*. With regard to target gender, eight participants (4.4% of the total sample) mentioned something about gender in response to the first item on the PEQ. All of those who mentioned gender questioned why only male or female descriptions were used.

The second item on the PEQ asked participants if there was anything that would have made the emotion descriptions more realistic or easier to understand. A total of 52 participants (28.7%) wrote something in response to this item. In general, responses to this item indicated that more background about the situation and more detail about the experiencer could have been included in the descriptions. In addition, four participants

mentioned the 8-point response scales, and in particular those that ranged from *-4* to *+4*, as confusing. Only two participants (1.1% of the total sample), both of whom were female, mentioned gender in response to this item. Specifically, these participants wondered why they read about only males or only females.

The third item on the PEQ asked participants if anything struck them as unusual or not quite right as they read through the descriptions. Twenty-five participants (13.8%) circled "yes" in response to this item, and these responses were approximately equally distributed across the categories of participant and target gender. Responses to this item included particular references to details of the scenarios, or simply referred to the brevity of the descriptions. A total of eight participants (2 males and 6 females) referred to gender when asked what was unusual about the emotion descriptions. Specifically, these participants noted that they were asked only about males or only about females and that this seemed unusual.

The fourth item on the PEQ simply asked participants if they had any difficulty with the rating scale questions about the emotions. Twenty participants (11.0%), which included 4 males and 16 females, circled "yes" in response to this question. As in the previous studies, however, participants were not asked specifically what it was about the items that gave them difficulties. However, responses to the first two items on the PEQ provided some insight into the nature of these difficulties. Specifically, several participants reported that they found the 8-point scales too extensive and confusing, particularly those that ranged from *-4* through *+4*. Thus, it would appear that the questions relating to appropriateness and consensus caused the most difficulties. Nonetheless, only a small number of participants reported having these kinds of

difficulties in the first place.

The final item on the PEQ directly addressed the fact that participants were asked the same questions for both experience and expression of emotions. Specifically, participants were asked if they were able to separate their thinking about how the people in the scenarios felt each emotion from their thinking about how the people in the scenarios showed each emotion. For this item, 163 participants (90.1%) indicated that they thought that they could indeed separate their thinking about how the targets felt emotion from how the targets showed emotion in the scenarios. Thus, only 17 participants (9.4%) reported having difficulty with this task.

The second part of this item asked participants if they had any particular ideas about how they were supposed to answer when they were asked the same questions twice for each emotion. In response to this item, 10 participants (5.5%) indicated that they thought they should respond "the same" to both sets of questions, 40 participants (22.1%) indicated that they thought they should respond "differently" to each set of questions, and 128 participants (70.7%) indicated that they didn't really think about it and "just answered the questions." These types of responses were approximately equally distributed across the categories of participant and target gender. As in Study 1, however, the instructions that formed part of the Introduction to the study forewarned participants about the dual focus on experience and expression, and encouraged participants to read all questions carefully to know what they were being asked about. Thus, it could be that participants who reported that they thought they should respond "differently" to each set of questions may have been trying to indicate simply that they were aware of the difference in perspective and tried to answer accordingly. Further use of this particular

item on a PEQ for the emotion task would require clearer response alternatives.

Discussion

Recall that whereas the purpose of Study 1 was to examine the manner in which people perceive their own emotions in terms of intensity, causality, appropriateness, consensus, and control, the purpose of Study 3 was to examine the manner in which people perceive the emotions of others in terms of these factors. An additional purpose was to examine the influence of gender on perceptions of emotions. The present discussion will focus on the main results of Study 3, especially as they apply to the hypotheses proposed in advance.

With regard to intensity of experience and expression, the results first of all confirmed the manipulation by showing that responses created to be of differing intensities were in fact perceived to differ in intensity. Specifically, mild responses were rated as the most mild, intense responses were rated as the most intense, and moderate responses were rated in-between. Examination of the mean values revealed that the triggers apparently were perceived as eliciting at least moderately intense feelings for all emotions, whereas ratings for displays had a greater range of values. These observations are perfectly consistent with the strategies employed in creating the emotion scenarios because the triggers were designed to be of above-moderate intensity, and the responses were designed to be of lower, matching, and higher intensities than the trigger.

The results for intensity also provided support for the hypothesis that feelings of emotion would be rated as more intense than displays of emotion. With the exception of intense responses for anger, happiness, and sadness, results revealed that in all other cases the pattern was in accord with research on the secret self effect which suggests that

people perceive emotions as being experienced more intensely inwardly than they are shown outwardly (Johnson, 1987; Johnson et al., 1988). Although the secret self effect initially referred to self-perceptions, the results of this study, combined with those of Studies 1 and 2, provide further evidence that this trend also holds for perceptions of others' emotions. With regard to the lack of effect for intense anger, intense happiness, and intense sadness, it may be that both feelings and displays were perceived as so intense that a type of "ceiling effect" prevented feelings from being seen differently from displays of emotion. Thus, the extent to which the secret self effect applies to very intense emotions is in need of further investigation. Overall, however, it would appear that, in general, feelings of emotion are perceived as more intense than displays of emotion, for both self and others.

Finally, of importance with regard to the intensity results, no significant effects were found for target gender (with the exception of a small, inexplicable interaction effect for the emotion of happiness). Thus, the hypothesis that the emotions of females would be rated as more intense than the emotions of males received no support. This result is somewhat surprising given the wealth of evidence which suggests that gender stereotypes remain strong and pervasive, especially as they apply to perceptions of emotion. Possible reasons for the lack of significant effects will be addressed in detail in the General Discussion to follow.

With regard to attributions, results provided support for the hypothesis that external attributions for emotion would exceed internal attributions for emotion. Examination of the attribution ratings revealed that, whereas ratings for internal attributions varied around the mid-point of the scale, ratings for external attributions were

closer to the high end of the scale. These results are consistent with the self-ratings from Study 1 because in both cases external attributions exceeded internal attributions, but internal attributions still were considered as at least moderately contributing to the causes of emotions.

With regard to attributions, some evidence also was found to suggest that when a more intense response was described as accompanying an emotion trigger, more attributions, both internal and external, were made. This effect did not hold for happiness, however, nor for external attributions for anger. Although this effect was not perfectly consistent across all emotions or all levels of response intensity, it is a trend which is in accord with the attributional principle which suggests that responses that are particularly extreme or unusual tend to evoke perceptions of multiple causality (Kelley, 1972; Locksley & Stangor, 1984). No evidence was found in support of the hypothesis that the emotions of female targets would be attributed to internal factors more than the emotions of male targets.

Results for appropriateness of feelings and displays provided additional confirmation of the experimental manipulations. That is, ratings for mild, moderate, and intense responses differed from one another such that mild responses were rated as under-reactions, moderate responses were rated as appropriate reactions, and intense responses were rated as over-reactions. Examination of the mean values revealed that mild responses were rated as "slight" to "moderate" under-reactions and intense responses were rated as "slight" to "moderate" over-reactions. Interactions between response intensity and emotion domain for appropriateness suggested that ratings varied in pattern slightly across response intensity and emotion domain for each emotion type; however,

these differences were of small magnitude. No effects for target gender were found.

For ratings of consensus, results revealed that mild, moderate, and intense responses differed significantly from one another such that mild responses elicited ratings that others would feel and show "slightly" to "moderately" more emotion than the targets in the scenarios, moderate responses elicited ratings that others would feel and show the same amount of emotion as the targets in the scenarios, and intense responses elicited ratings that others would feel and show "slightly" to "moderately" less emotion than the targets in the scenarios. Although there were some emotion-specific effects of small magnitude for ratings of consensus, no consistent effects for target gender were found.

For ratings of control, results provided support for the hypothesis that targets would be perceived as having more control over their displays of emotion than over their feelings of emotion, although the differences were of relatively small magnitude. Results also provided support for the hypothesis that targets were seen as having less control over intense feelings and displays of emotion. That is, in general, more intense feelings and displays of emotion were rated as less controllable than more mild feelings and displays. Again there were no consistent effects for participant gender or target gender, and therefore no evidence to support the stereotype-based speculation that females would be rated as being less in control of their emotional experiences and expressions than would males.

Overall, although the results of Study 3 provided support for many of the hypotheses and revealed several important effects for response intensity and emotion domain, the most striking result is the almost complete lack of effects due to target gender. That is, ratings of male and female targets were expected to differ at least for

intensity, attributions, and control, with differences for appropriateness and consensus also speculated as possible. The lack of effects for target gender, however, suggests that the emotions of male and female targets were perceived similarly rather than differently. In addition, the complete lack of effects due to participant gender suggests that males and females had similar perceptions. Thus, the current results suggest that males and females neither perceive emotions differently, nor are perceived to differ in their emotionality. Although these results contradict much research on gender stereotypes and gender differences in emotion, the findings are consistent with the notion that males and females are more alike than different in their emotions, especially when the emotions under consideration are reports of specific feelings rather than global reports of emotionality (LaFrance & Banaji, 1992; Robinson & Johnson, 1997; Shields 1991, 1995). Both theoretical and methodological considerations and implications related to these findings are addressed in the General Discussion to follow.

With regard to methodology, responses to the PEQ items provided a good deal of information about how participants approached the experimental task in Study 3. Specifically, responses to the PEQ revealed that a small number of participants seemed to be bothered by the fact that they responded only to the emotions of males or only to the emotions of females. That is, these participants mentioned the lack of other gender perspective as unusual. However, the extent to which this may have affected their actual responding to each of the emotion scenarios is not known.

Responses to the PEQ also revealed that, as in the previous studies, several participants reported having difficulty with the rating scale items. Although participants were not asked specifically what kind of difficulties they had with the items, responses to

other items on the PEQ provided some clues as to the nature of these problems. That is, a small number of participants mentioned that they found the rating scales themselves to be problematic or unusual, especially the scales that ranged from *-4* to *+4*. Recall also that data from two participants were excluded from the final analyses because these participants responded in an unusual fashion to the appropriateness and consensus items. Thus, it would appear that a small number of participants had difficulty using the number scales that were employed in this study. A couple of participants also mentioned having difficulties with the wording of some of the questions, including those that referred to consensus and control. The nature of such difficulties would need to be further explored before these same items are employed in future research.

The final finding of importance from the PEQ is that the vast majority of participants (91%) reported being able to separate their thinking about how the experiencers felt each emotion from their thinking about how the experiencers showed each emotion. Thus, the fact that some questions were asked twice on the questionnaire did not seem to pose a problem to most participants. However, a substantial number of participants reported having particular ideas about how they were supposed to respond to the same questions that were asked once with regard to experience of emotions and once with regard to expression of emotions. Specifically, 22% of participants reported thinking that they were supposed to respond "differently" to each set of questions. Again, however, the fact that this dual focus was pointed out as very important in the introduction and that participants were encouraged to read all questions carefully to know what they were being asked about may have affected participants' interpretations of this PEQ item. That is, some participants might have been trying to indicate simply that they

were aware of the difference between the two types of questions and that they responded appropriately to each one. On the other hand, a true demand characteristics interpretation would suggest that participants may have believed that the experimenter expected different responses to the items that were similar, and that responses were influenced by these kinds of perceptions. Nevertheless, the PEQ does not provide any further information about this item, and therefore the exact nature of these responses cannot be confirmed. Further issues relating specifically to the nature of the questionnaires and more generally to the methodologies employed in all of the studies are addressed in the General Discussion.

General Discussion

Three studies were conducted as part of a program of research examining the nature of implicit theories of emotion. In general, the objectives of this research were to provide a richer and more comprehensive understanding of perceptions and explanations of own and other's emotions, as well as to explore the effects of gender on these perceptions. More specifically, the research questions were stated as follows:

(1) How do individuals perceive their own emotions in terms of intensity, appropriateness, consensus, locus of causality, and controllability?

(2) How do observers perceive the emotions of others in terms of these factors?

(3) To what extent does gender affect perceptions of emotions?

These questions are broadly addressed in this section based on the results of the present research as well as with reference to other research and theory which is relevant to the topic of implicit theories of emotion. Theoretical and methodological considerations are taken into account throughout the discussion.

Perceptions of Own Emotions

Study 1 in this series was designed to assess individuals' perceptions of their own experience and expression of emotions in terms of intensity, appropriateness, consensus, locus of causality, and controllability. Toward that end, participants were asked to describe anger, anxiety, happiness, and sadness emotions that they recently experienced, and then answer a series of questions about those emotions. On the basis of the results from this study, several general observations can be made regarding the manner in which individuals were found to perceive their own emotions.

Ratings of emotion intensity in Study 1 indicated that, when recalling recent episodes of emotion, participants chose to report and rate emotions that were fairly intense as compared to mild. Overall, happiness, which was the only positive emotion investigated in these studies, was rated as the most intense for both feelings and displays. As predicted, however, analyses of intensity ratings for all emotions revealed that, in general, emotional experiences were rated as more intense than emotional expressions. This finding is in accord with research on "hidden affect" or "the secret self" which has shown that people believe that they feel more emotion inwardly than they display outwardly (Johnson, 1987; Johnson et al., 1988). In previous studies of this phenomenon, however, participants were asked to estimate or predict what they would feel and show in hypothetical situations, whereas in the current research participants made judgments about their own *real* emotions. Thus, the secret self effect apparently applies to real emotional situations as well as the previously-studied hypothetical or imagined ones.

The findings relevant to the secret self effect suggest that people generally and consistently believe that they suppress full public display of their affect. According to

Johnson (1987), this type of perception may lead individuals to believe that their overt behaviour is less valuable as a source of information to others because so much of their inwardly experienced affect is never displayed outwardly. Thus, despite how a person may appear to others based on his or her gestures or behaviour, he or she may believe that others are unable to truly understand the real underlying feelings that are being experienced in a particular circumstance. Furthermore, according to Johnson (1987), this kind of perception may become particularly problematic when an experiencer's self-perceptions are compared to observers' perceptions because observers' perceptions may reflect more of a one-to-one correspondence between felt and displayed emotion. That is, Johnson has argued and provided evidence to suggest that observers detect less hidden affect, or less of a discrepancy between the feelings and displays of emotion in others. Although the results from Studies 2 and 3 in this series suggest that observers are indeed aware that experiencers feel more emotion inwardly than they show outwardly, the data do not allow for a direct comparison between experiencer's perceptions of their own emotions and observers' perceptions of those emotions. Thus, direct comparison between experiencers' and observers' perceptions of real emotions is an area that requires further investigation.

Another important issue that was addressed in Study 1 concerned how individuals explained the causes of their emotions, or to what factors they attributed their emotions. Ratings for internal and external attributions revealed that participants made external attributions to a greater extent than internal attributions, and this finding is in accord with well-established research which has shown that people in general tend to make external attributions for their own behaviours (Jones & Nisbett, 1971; Frank & Gilovich, 1989).

However, the current findings add to this body of attribution research because they suggest that like outward behaviours, inward experiences also are attributed to external factors to a large extent.

An additional finding of importance with regard to attributions for emotions was that although participants gave external factors more weight in explaining their own emotions, internal factors also were taken into consideration and were rated as contributing at least moderately to the onset of emotion. Thus, participants acknowledged the contribution of both external or environmental factors, such as things that happened or things that other people said and did, as well as internal or personal factors, such as one's mood or one's own personality in the onset of emotion. Given that participants recognized the contribution of both external and internal factors in influencing their emotions, it appears that, in general, participants attributed their emotions to multiple causes. This finding, which was based on accounts of real experienced emotion, corroborates that of other research which has shown that even when external attributions for emotions are favoured as explanations of those emotions, internal factors still are taken into account (Karasawa, 1995; Lui et al., 1992). Thus, it may be that emotions are particular kinds of experiences that generally tend to be attributed to multiple causes, perhaps due to their personal and often profound nature. Alternatively, it may be that the research methodologies employed in studies of emotion to date have tapped only those emotions with this type of attribution pattern.

With regard to the relative weight accorded to internal versus external attributions in explaining emotions, Karasawa (1995) has suggested that perhaps related to causal explanations are perceptions of appropriateness, such that emotions that are perceived as

inappropriate given the eliciting circumstances are more likely to be attributed internally. In Study 1, analysis of appropriateness ratings suggested that although participants tended to rate their feelings of emotion as very slight over-reactions, average responses to the appropriateness questions were not extreme and in general were close to the "appropriate" point on the scale. Thus, apparently participants felt for the most part that their emotional experiences and expressions generally matched the emotional stimulus that triggered their emotions. One possible explanation for these overall perceptions of high appropriateness is that people may have a general tendency to believe that their own reactions, both emotional and otherwise, for the most part tend to match triggering stimuli. This type of self-serving bias may help individuals to feel that their actions are just and rational and that they are adaptable to varying situations and circumstances (Sande, Goethals, & Radloff, 1988). An equally likely explanation, however, is that because participants in this study were asked to describe emotions that they recently experienced, they simply may have chosen to report emotions that they believed were appropriate or socially acceptable while withholding reports of those that may be perceived as less appropriate or less acceptable. Thus, the attributional patterns that result when own emotions are perceived to be inappropriate remain to be investigated, and, in order to do so, it may be necessary to specifically elicit descriptions of emotions that are considered to be inappropriate.

With regard to control, ratings indicated that participants felt at least a moderate level of control over their feelings and displays of emotion. However, in accord with other research in the area (Johnson et al., 1988) displays of emotion were rated as at least slightly more controllable than feelings of emotion. Overall, participants reported the

most control over feelings and displays of happiness, despite the fact that happiness also was reported as the most intensely experienced emotion. Thus, although some support was found for the notion that feelings of emotion are perceived as less controllable than displays of emotion, it would appear that participants perceived themselves to have at least moderate levels of control over both aspects of their emotions. Given that control was conceptualized in these studies as meaning a perceived feeling of influence over the experience and expression of emotion, individuals apparently believe that they should be able to do something about their feelings and displays of emotion as compared to being controlled entirely by them. It would seem, then, that rather than "unbridled emotions," individuals generally tend to think that their own emotions are under their own control at least to a moderate extent.

Also of concern in the present research were issues related to social comparison processes, and specifically whether participants believed that others would feel and show more, less, or the same amount of emotion that they themselves did in the circumstances they described. For consensus, participants' ratings indicated that they thought that others generally would feel and show the same amount of emotion that they themselves did in the same circumstances. For the most part then, participants thought that their emotions were appropriate and that others would experience and express emotion similarly given the same circumstances. That is, participants estimated very high consensus for both their feelings and displays of emotion, and this occurred equally for all emotions despite evidence from other studies which has suggested that people tend to perceive consensus for their negative or neutral traits, opinions, and emotions, whereas they tend to perceive uniqueness for their more positive qualities (Goethals, 1986; Goethals et al., 1991;

Johnson, 1987; Johnson et al., 1988; McFarland & Miller, 1990). This high consensus for own emotions is, however, in accord with the theorizing of Heider (1958) who argued that experiencers of emotion expect similarity in emotional reactions due to the perceived external eliciting stimulus. That is, Heider suggested that because emotions tend to be attributed externally, experiencers of emotion expect that others would react similarly to the same stimulus. High consensus was found in the present study along with high ratings for external attributions; however, recall that attributions to internal factors, which presumably would reflect causes that are more idiosyncratic or unique to the individual, also were rated as at least moderately contributing to the emotions. Thus, the simple explanation focussing on external attributions may not be enough to fully account for the high consensus ratings. Whether such consensus ratings result primarily from motivational factors or cognitive processing factors also is an avenue in need of further investigation.

Returning now to the point with which the discussion of Study 1 began, given that participants rated their feelings as more intense than their displays of emotion, the consensus results imply that participants believed that others similarly would have hidden emotion that was felt but not displayed. There was no evidence to support the idea that experiencers of emotion would see their feelings as being more intense than those of others in the same circumstances, nor that they would display socially undesirable emotions less than others would (Johnson, 1987; Johnson et al., 1988; Struthers & Johnson, 1991). Thus, there was no evidence to suggest that participants perceived their own emotions as being more intense than others, or that they are much more aware of their own hidden affect or secret selves than they are of others' undisclosed affect.

Perceptions of Others' Emotions

Studies 2 and 3 in this series were designed to investigate the manner in which observers perceive the emotions of others. Specifically, Study 2 was designed to obtain objective ratings of the emotion triggers and the responses to those triggers that were reported by participants in Study 1. In Study 2, participants estimated the levels of emotion that would be most appropriate to feel and show in each of the emotional situations reported by participants in Study 1. Results revealed that in Study 2, as in Study 1, participants estimated that it was appropriate to feel at least slightly more emotion than one would show for all of the emotions. That is, observers of emotion estimated that it would not be appropriate to show outwardly all of the emotion that one is feeling inwardly. Thus, experiencers and observers alike recognize that people tend to have hidden or undisclosed emotion, rather than wearing their "hearts upon their sleeves" (Johnson, 1987). This finding again points to the importance of emotion domain (i.e., experience vs. expression) as a theoretical factor in investigations of emotion.

Study 2 also allowed some indirect comparisons to be made between the ratings of experiencers' perceptions of their own emotions as reported in Study 1 and observers' perceptions of those same emotional triggers as judged in Study 2. This cross-study comparison revealed that, although observers in Study 2 rated the emotional triggers that participants reported in Study 1 as fairly intense, their ratings were somewhat lower than those of experiencers. That is, observers judged that less emotion would be appropriate to feel in those situations than the experiencers reported actually feeling. Experiencers' and observers' ratings of expressions were closer, however, such that the levels of emotion that experiencers reported showing in the emotional situations were more similar to what

observers judged as appropriate display levels in those situations. Thus, although observers and experiencers rated expressions similarly, they differed in terms of intensity of experience in the emotional situations, with experiencers reporting feeling more emotion than observers thought would be appropriate to feel in those situations.

Although the cross-study results must be interpreted with due caution, they do point to an interesting avenue for further investigation because the implications of this type of discrepancy between observers' and experiencers' perceptions of emotions would be most interesting to explore. The idea that observers might perceive emotion triggers as eliciting less intense emotions than experiencers actually feel implies that observers may have a tendency toward seeing experiencers as over-reacting, at least internally, or as not being fully justified in the intensity of their feelings. Recall that, according to Karasawa (1995), these are the circumstances in which greater internal attributions may be made when explaining the causes of another's emotion, and correspondingly the experiencer may be more likely to be blamed or held responsible for that emotion. However, observers usually must base their estimations of the intensity of emotional feelings on the observed intensity of emotional displays, and the results of Studies 1 and 2 suggest that observers' ratings of displays were more in line with the level of emotion that experiencers actually showed. Thus, the discrepancy may be minimized if observers' judgements of emotion intensity are based on emotional expression. Regardless, the nature and implications of the extent to which experiencers' and observers' perceptions of emotion match would be an important avenue for future research.

Study 3 in this series allowed a more detailed look at observers' perceptions of emotions. In this study, participants read about emotion triggers as well as a male or

female target's emotional response in the described situations. Participants then answered questions about intensity, appropriateness, consensus, locus of causality, and controllability much as participants did in Study 1. The results of this study provided some interesting observations about the nature of how people perceive the emotions of others.

With regard to intensity, results again showed strong effects for the factor of emotion domain, meaning that feelings were perceived as differing from displays of emotion. Specifically, feelings of emotion were rated as more intense than displays of emotion, again providing support for the hidden emotion or secret self effect and emphasizing the need to consider feelings separately from displays when examining perceptions of emotions.

Observers' ratings for attributions also were consistent with the results of Study 1, in that observers rated external factors as more influential in causing the emotions than internal factors, but at the same time they also rated internal factors as at least moderately contributing to the causes of emotions. There was no evidence to suggest, however, that observers' ratings of internal attributions would be particularly high, or that the person would be perceived as more implicated in terms of causation when their negative emotions were evaluated by another (as suggested by the research of Karasawa, 1995). Thus, in contrast to perceptions of actions, which are more likely to be seen as voluntary and attributed internally (McArthur, 1972; Zuckerman & Feldman, 1984), external attributions for emotions tend to be favoured for both self and others. Implicit theories of emotions therefore appear to correspond to scientific theories of emotion which conceptualize emotion as having an object and being "about" something.

Further with regard to observers' attributions for emotions, there was some evidence to suggest that more attributions, both internal and external, were made when a more intense response was described as accompanying an emotional trigger. This result makes sense when considered in light of evidence suggesting that greater explanations are sought for unusual or extreme responses (Kelley, 1972; Locksley & Stangor, 1984). However, given that the effect in the current study was neither strong nor consistent across emotions, it would be useful to delineate more specifically the circumstances in which such an attributional pattern is especially likely; that is, it would be most interesting to explore the circumstances in which more as compared to fewer attributions or explanations are generated for the causes of emotions.

Observer's ratings for appropriateness and consensus in Study 3 basically served to confirm the experimental manipulations and showed no interaction effects that would shed light on any of the theoretical issues of concern. The lack of effect for appropriateness on attribution ratings is somewhat surprising given the expectation that more inappropriate emotions would be attributed internally to a greater extent than those that were more appropriate. Recall that since the emotions varied only in intensity, it is possible that the emotions were not seen as inappropriate enough to make such an effect noticeable. In future research, it would be useful to delineate those circumstances in which internal attributions for emotion are most likely to occur, as well as what the implications of greater internal attributions actually are.

Observers' ratings of control again paralleled the self-rating results of Study 1, with targets being perceived as having more control over their displays of emotion than over their feelings of emotion. There also was some evidence to suggest that more intense

feelings and displays of emotion were rated as less controllable than less intense ones. Thus, when viewing the emotions of others, it would appear that people have tendency to believe that individuals have at least moderate control over their emotions, although intense emotions are recognized as more difficult to control. According to both experiencers and observers, then, emotions are thought to be under the control of the experiencer to at least some extent, rather than the experiencer being controlled by the emotions.

The relatively high control ratings made by both experiencers and observers have important implications both for experiencers' own perceptions of themselves as well as for social interaction between experiencers and observers. For example, if an experiencer believes that he or she should be able to control his or her own feelings and displays of emotion but does not do so in a particular situation, this is likely to have an effect on related self-evaluations and affect (Fridja et al., 1995; Fridja & Mesquita, 1998; Mayer & Gaschke, 1998). In this way, then, judgments about the emotional experience itself further contribute to the overall affective experience. Similarly, if an observer of emotion believes that the experiencer should be able to control his or her feelings and displays of emotion within certain limits, then interaction is likely to be impaired when the experiencer shows too much or too little control over feelings and/or displays of emotion. The extent to which these types of perceptions of emotional control affect self- and other-evaluations is another area worthy of further investigation.

Gender and Perceptions of Emotion

Given the strong gender stereotypes that exist concerning emotion, as well as the research which suggests that men and women really do differ in characteristic levels of

emotionality, any effects due to gender were of prime concern in the present research. In this series of studies, gender was taken into account in three distinct and important ways: (a) experiencer gender, or gender of the person who actually felt an emotion (as in Study 1); (b) observer gender, or gender of the person who was observing or judging an emotion (as in Studies 2 and 3); and (c) target gender, or gender of the person whose emotional reaction was being observed (as in Study 3).

Study 1 allowed a direct comparison between the emotion reports of male and female experiencers. Results for rated intensity of experience and expression revealed that, as predicted, female participants reported more intense emotions than male participants. This result is in accord with previous research which has shown that, overall, women tend to report experiencing and expressing emotions to a greater degree than men (e.g., Allen & Haccoun, 1976; Diener, Sandvik, & Larsen, 1985; Fujita, Diener, & Sandvik, 1991; Grossman & Wood, 1993; Robinson & Johnson, 1997). However, further analyses revealed that this result should be interpreted with caution. Specifically, when each emotion was analyzed separately, the gender effect held only for the emotions of happiness and sadness, suggesting that females reported being both happier and sadder than did males. In addition, the effect was found to be stronger for displays of emotion than for feelings of emotion; thus, although females rated both their feelings and displays of emotion as at least slightly more intense than did males, this was especially the case for displays.

In general, the pattern of results obtained in Study 1 suggest that self-reported gender differences in emotion may occur mostly for specific emotions such as happiness and sadness, and especially for the domain of expression. As noted in the discussion for

Study 1, this result is in accord with the observations of Kring and Gordon (1998) who argue that the evidence regarding gender differences in emotional intensity is more convincing for displays than for feelings of emotion. In other words, to the extent that gender differences exist, they may be more apparent for the domain of expression than for experience of emotion. And, to quote again from Kring and Gordon (1998), the answer to the question of whether men and women really differ in their experience and expression of emotion apparently is "neither simple nor straightforward" (p. 698).

Overall, then, the data for self-rated intensity suggest that although the well-documented and firmly-entrenched gender stereotypes of emotion may have some basis in reality, the actual differences reported by men and women may not be as dramatic or as global as the stereotypes would suggest. In view of this finding, and given that analyses for the variables of attributions, appropriateness, consensus, and control revealed no strong or consistent effects for experiencer gender, the most appropriate conclusion at this point would be that men and women are more alike than they are different in their emotional lives, at least in terms of the variables that were taken into consideration in this series of studies. Of course, however, this conclusion must remain tentative because it is based on one type of methodology which involved self-reports of remembered emotions. Results such as these need to be replicated using similar methodologies as well as corroborated using alternative methods. Nevertheless, the current findings are in accord with a growing number of studies which have found no differences in the frequency or intensity of emotional experience between men and women (e.g., Averill, 1982; Oatley & Duncan, 1992, 1994).

Study 2 in this series allowed a comparison between males and females as

observers of emotion, as well as the opportunity to determine whether male and female participants in Study 1 provided emotion descriptions that differed in objective intensity. An examination of objective intensity of experience and expression elicited by the emotional situations reported by males and females in Study 1 seemed especially important given that the differences in self-reports of emotion intensity could be accounted for by differences in objective intensity elicited by the emotion triggers. That is, it seemed possible that females in Study 1 may have rated their emotions as more intense because they correspondingly reported emotion triggers of greater intensity than did males. However, this turned out to be the case only for the emotion of anger. Specifically, the anger triggers reported by female participants in Study 1 were rated as eliciting greater intensity of anger feelings and displays than the anger triggers reported by males. Although the magnitude of this effect was small, it was somewhat surprising given that anger is one emotion that is more characteristically associated with men than with women. Nevertheless, given the lack of differences for the other emotions as well as the small magnitude of the effect for anger, the results suggest that, overall, male and female participants in Study 1 described emotional triggers of approximately equal intensity.

With regard to observer gender in Study 2, only one small effect was found which suggests that females saw the sadness triggers as eliciting more intensely sad feelings and displays than did males. Given that female participants in Study 1 rated their own feelings and displays of sadness as more intense than did males, it would appear that men and women may be most likely to differ in their perceptions of the emotion of sadness. That is, the evidence from these studies suggests that women both perceive sad situations

as sadder than do men, and that women also perceive their own feelings of sadness as more intense than do men. Overall, although men and women may indeed be more alike than different in their perceptions of emotions, it may be that there are some specific perceptions, such as those related to sadness intensity, that differentiate the emotional lives of men and women.

Study 3 allowed for detailed analyses involving observer and target gender. Again, however, the most striking result was the lack of consistent effects of any type regarding gender. Thus, there was no evidence to suggest that the emotions of female targets are perceived as more intense, more internal, or less controllable than those of male targets. Moreover, the lack of effects for observer gender suggest that males and females who acted as observers of the emotions did not differ substantially in their evaluations of the male and female targets. Overall, then, according to the results of Study 3, it would appear that males and females neither perceived emotions differently, nor were they perceived to differ in their emotionality. Study 3 thus provided more evidence pointing to similarities rather than differences across gender.

Overall, the combined results from Studies 1, 2, and 3 suggest that there are more similarities than differences across gender, although specific differences, such as differences in perceptions of sadness, may occur. Given the strong gender stereotypes that have been documented, as well as the research which has suggested that men and women really do differ in characteristic levels of emotionality, the question that arises, then, is why was there such a dramatic lack of differences in the current set of studies? One obvious explanation is that which has already been stated: perhaps men and women really are more alike than they are different in their perceptions of emotions. Although

this conclusion contradicts much research on gender stereotypes and gender differences in emotion, some previous studies similarly have reported no differences in the frequency or intensity of emotional experience between men and women (Averill, 1982; Oatley & Duncan, 1992, 1994). Thus, it may be that any differences that exist are few in number or slight in magnitude, such that some studies detect them whereas others do not.

Two other points to be addressed concerning the general lack of gender differences focus on methodological issues inherent in the current series of studies. First of all, the methodology employed to examine the impact of experiencer gender involved having participants recall real and specific episodes of emotion that occurred in the recent past. This type of methodology differs quite dramatically from that of many previous studies in which gender differences were found when participants were asked to report on their *average* or *characteristic level* of emotional intensity. Thus, it may be that men and women differ significantly in their estimates of their own average or characteristic levels of emotion, but differ less in their judgments when the emotions under consideration are reports of specific feelings. This argument is in accord with that of other researchers who have suggested that gender differences may be more apparent when considering global reports of emotionality as compared to specific incidents (e.g., LaFrance & Banaji, 1992; Robinson & Johnson, 1997). Moreover, the same type of reasoning may help to account for the lack of differences found for the variable of target gender. That is, in most previous studies of gender stereotypes participants were asked about men's and women's average or typical qualities, rather than about very specific behaviours or events (e.g., Bergen & Williams, 1991; Broverman et al.,1972; Rosenkrantz et al., 1968; Street et al., 1995; Williams & Best, 1982). Thus, it may be that well-established stereotypes are

applied more sparingly when observers consider specific individuals in specific situations as compared to considering average characteristics of vast target groups (Shields, 1991, 1995). This is an issue in need of further investigation, especially as it applies to gender and perceptions of emotion.

Secondly with regard to methodological issues, it may be that the methods employed in the current series of studies elicited responses that were biased in some way. For the self-reports of emotion in Study 1, for example, it may be that either males or females were more or less comfortable with this method of disclosure, such that the overall nature of their responses were systematically affected in some way. Similarly, even though the scenarios employed in Study 3 were created based on the real emotions described in Study 1, it is possible that there was something about the scenarios themselves that affected responding. Recall that only one scenario for each emotion type was used, and this fact alone points to the need for replication of these results.

Further Methodological Considerations

Although some important methodological issues already have been addressed in the previous sections, here some further, more general statements are made about the methodologies employed in the current series of studies. Both observation of participants during the studies as well as the PEQ's employed in each provided valuable information regarding the procedures that were used.

Firstly with regard to methodology it is important to state that, very generally, responses to the PEQ's in all three studies revealed that the majority of participants had a positive view of the studies and were able to complete the experimental tasks without any major difficulties. Based on observation of participants during the study and examination

of responses to the emotion questionnaires, this seemed to be especially the case for Study 1, in which participants showed few obvious problems with the methodology and appeared to be able to invest themselves fully in the task and report emotions that were of importance to them. In general, the experimental environment created in Study 1 was one in which participants apparently felt comfortable enough to disclose information that was personal and meaningful to them. Overall, across all three studies, all available evidence suggests that participants were willing and able to become involved in the procedures and provide thoughtful responses to items on the questionnaires.

Despite the overall positive response to the experimental procedures, however, responses to the PEQ's did highlight some areas that could be improved upon in future investigations. For example, some participants reported having difficulties with some specific items on the emotion questionnaires. For self-reports of emotion in Study 1, for example, over one-third of the participants reported having difficulty recalling one or more emotions during the course of the study, and over one-half of the participants reported having difficulty describing their emotions in words. Apparently, however, this difficulty with description was due to the fact that emotions are subjective and hard to put into words rather than a problem with disclosure. Given that all participants (except one) managed to report an emotional event of each type, and given that the overwhelming majority of descriptions were clear and coherent, it would appear that, despite some reported difficulties with this method of collecting emotion reports, asking participants to remember recent emotions and evaluate them is a method worthy of further refinement and use in investigating the nature of implicit theories of emotion.

In addition to the above-reported difficulties with self-reports, participants across

all three studies also reported some minor problems with the rating scale items. Although the exact nature of these problems could not be discerned from the responses to the PEQ's, some clues pointed to specific items as underlying these types of difficulties. Specifically, some participants seemed to have concerns over the items dealing with appropriateness and consensus, which were the items for which scales ranged from *–4* through *+4*. Apparently these types of items caused some confusion among a small minority of respondents. In addition, a small number of participants referred to difficulties with the items dealing with control over feelings and displays of emotion, although the exact nature of these difficulties could not be discerned from the PEQ responses. Nevertheless, these issues concerning specific questionnaire items would need to be addressed before the items are used more extensively.

One further issue that was highlighted by responses to the PEQ's concerns the repetition of questions relating to both feelings and to displays of the same emotion. Although responses indicated that the vast majority of participants did not have difficulty separating their thinking about how emotion was felt as compared to how emotion was displayed, some participants reported that they thought that they should respond *differently* to the two sets of questions. As already noted in previous discussions, it is unclear at this time whether participants meant that they were aware of the differences between the two types of questions and tried to answer appropriately, or whether they thought that the experimenter expected different responses to these items. Nevertheless, emotion domain (experience vs. expression) emerged as a very important theoretical variable, and the nature of responses from participants indicated that they also were aware of and able to think separately about each emotion domain.

Overall, in view of the issues raised by responses to the PEQ, a careful examination of the emotion questionnaires used in the current series of studies would be necessary before they are used again in subsequent research. One strategy that is worthy of pursuit would be to present the questions in an interview style to individual participants in order to obtain information about how participants are interpreting the questions as they go about answering them. Alternatively, or in addition, a thought-listing procedure carried out in conjunction with the questionnaire also could provide valuable insight into the nature of responding. These types of strategies would provide valuable information about how respondents interpret and approach each item on the questionnaire, and information obtained in this fashion could be used to improve the specific self-report and rating scale items employed in this type of research.

One further point to be addressed with regard to the current methodologies concerns more generally the type of approach that was used in eliciting judgments of own and other's emotions. For perceptions of own emotions, for example, participants were asked to think back to a recent time when they felt particular emotions and then make judgments about them. Although the use of retrospective self-reports of emotion is quite common in the study of emotions, (e.g., Ellsworth & Smith, 1988a, 1988b; Fridja, Kuipers, & ter Schure, 1989; Scherer et al., 1983; Scherer & Wallbott, 1994), it would be most useful to pursue other methods of obtaining self-judgments of these phenomena. For example, it would be interesting to elicit perceptions of emotion as the emotion occurs. Although such "on-line" judgments might prove difficult to obtain, they would be most informative regarding *both* experiencers' and observers' perceptions of emotions. For example, it would be interesting to determine whether experiencers' and observers'

attributions about the causes of emotions would show the same pattern when considered during the height of an emotional experience as compared to after the experience. Similarly, it remains in question whether experiencers' would report feeling the same level of control over their emotions at the time of their occurrence as they would in retrospect. In fact, an overall comparison of on-line and retrospective perceptions would be most interesting to examine. That is, the question becomes: do people make the same kinds of judgments about emotions when they are occurring as they do when the experience is considered after the fact?

As already noted, similar arguments can be made concerning the methods used to elicit perceptions of others' emotions. That is, although the use of hypothetical stories or scenarios also is a common method employed in studies of emotion (e.g., Johnson, 1987; Johnson & Schulman, 1988; Lui et al., 1992; Reisenzein & Hoffman, 1990; Robinson & Johnson, 1997; Roseman, 1991; Schimmack & Deiner, 1997), it would be most useful to examine the nature of observers' perceptions via other methods. As noted, some type of "on-line" strategy to examine judgments of emotions as they occur would be a useful approach which would bring a greater degree of realism to this type of investigation. Similarly, rather than written scenarios, perhaps some type of audio or video presentation of emotional responses in emotional situations could be used as a method which still allows a good deal of experimental control. However, although the specific methodologies that could be used to examine the nature of implicit theories of emotion are many and varied, the point to be made here is that the ultimate goal of such research should be corroboration of findings using multiple methodologies each of which has its own inherent strengths and weaknesses. Overall, it would appear that the pursuit of

methods that approximate more realistic situations would be the most important next step at this time.

Future Directions

The current series of studies provided not only a great deal of information relevant to the study of implicit theories of emotion, but also raised many issues and provided the foundation upon which much further research may proceed. The need for replication and corroboration has been pointed out, and many interesting avenues for further investigation already have been highlighted throughout the current discussion. There are, however, some other, more broad issues that are relevant for future research, and these issues are addressed briefly here.

Several very important concerns that remain regarding the current series of studies involve the nature of the sample that was used to obtain the data and draw the conclusions regarding implicit theories of emotion. Specifically, introductory psychology students were recruited for participation in all three studies, and, as a result, conclusions were based upon responses from groups that were fairly homogenous in age and social class. Clearly, perceptions of emotions may vary across the lifespan and across class distinctions. Moreover, potential cultural differences in emotion were not addressed in any way in the current series of studies. Although several large and comprehensive studies have been undertaken to investigate the nature of emotional experience in various countries (e.g., Scherer et al., 1983; Scherer & Wallbott, 1994), the same type of cross-cultural comparison strategy has not been adopted in social psychological studies of emotion. A coherent and comprehensive program of research is necessary to adequately begin to address issues relating to culture.

In addition to addressing these very important issues concerning culture, age, and social class, there are many other questions that remain unanswered with regard to implicit theories of emotion. For example, what effects do perceptions of emotion have on interaction? What effects do discrepancies in perceptions between experiencers and observers have on interaction? Are most effects emotion-specific, or do they generalize across different types of emotions? Regarding emotion-specific effects, it also would seem important to broaden the scope of this type of research and investigate more types of discrete emotions. Although the current series of studies focussed on several basic, common emotions, obviously there are many other emotions that would prove interesting to investigate. For example, emotions such as love and jealousy often are considered to be more complicated emotional blends (Plutchik, 1980, 1989), and these might result in different kinds of social perceptions. Overall, potential avenues for future research are virtually endless, and continued investigation of these types of factors will contribute not only to our understanding of the phenomenology of emotional experience as well as implicit theories of emotion, but also more generally to the social processes of attribution, social comparison, gender stereotyping, and social interaction.

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Appendix A

Study 1 – Emotion Questionnaire

For this part of the questionnaire, we would like you to think about a time within the last month or two during which you felt the emotion of ***anger****. You can choose any kind of angry feeling at all, as long as it is specific and you can remember it well. Take a moment now to think of a time when you felt* ***angry*** *during the past couple of months.*

Now please answer the following questions about your feeling of anger:

1.) Explain *how you came to feel this way* by describing the circumstances in which your feeling of anger occurred. This might include descriptions of any specific thoughts you had, things that happened, or things that people said or did.
But please do not describe the way your anger showed, because you will be asked to describe how your anger showed (or did not show) later.

Be as descriptive as you can in a brief summary.

Now we would like you to answer some questions about the feeling of anger that you described above. The next questions ask about your INTERNAL FEELINGS or THE WAY YOU FELT INSIDE.

2.) Circle a number on the following scale that best describes how intense your feeling of anger was.

annoyance or very *mild* anger 0 1 2 3 4 5 6 7 8 very *intense* anger

moderate annoyance or anger

3.) To what extent was your feeling of anger the result of some specific event (for example, something that happened to you or something that someone else did)?

not at all 0 1 2 3 4 5 6 7 8 very much

4.) To what extent was your feeling of anger the result of something about you (such as your personality or the mood you were in before you became angry)?

not at all 0 1 2 3 4 5 6 7 8 very much

5.) To what extent was the amount of anger you were feeling in these circumstances a fitting reaction, as compared to an over-reaction or an under-reaction? Check one of the following:

-4	_____	extreme ***under***-reaction
-3	_____	strong ***under***-reaction
-2	_____	moderate ***under***-reaction
-1	_____	slight ***under***-reaction
0	_____	***very fitting*** reaction
+1	_____	slight ***over***-reaction
+2	_____	moderate ***over***-reaction
+3	_____	strong ***over***-reaction
+4	_____	extreme ***over***-reaction

6.) To what extent do you think that most other people would feel the same amount of anger as you did if they were in the same situation? Check one of the following:

-4	_____	most people would feel ***very much less*** anger than I did
-3	_____	most people would feel ***much less*** anger than I did
-2	_____	most people would feel ***moderately less*** anger than I did
-1	_____	most people would feel ***slightly less*** anger than I did
0	_____	most people would feel the ***same amount*** of anger as I did
+1	_____	most people would feel ***slightly more*** anger than I did
+2	_____	most people would feel ***moderately more*** anger than I did
+3	_____	most people would feel ***much more*** anger than I did
+4	_____	most people would feel ***very much more*** anger than I did

7.) To what extent were you in control of the amount of anger you were feeling inside?

not at all in control	0	1	2	3	4	5	6	7	8	very much in control

The next set of questions ask about the way you EXPRESSED your anger or THE WAY YOU SHOWED IT OUTWARDLY. This can mean the way you looked, the way you acted, what you said, and what you did.

8.) To what extent did your anger show outwardly? Circle a number on the following scale that best describes how intense your show of anger was.

annoyance or very *mild* anger	0	1	2	3	4	5	6	7	8	very *intense* anger

moderate
annoyance or anger

9.) In what way did your anger show? Include a description of the way you looked, the way you acted, what you said, and what you did.

_____

_____

_____

_____

_____

_____

10.) To what extent was the amount of anger you were showing in these circumstances a fitting reaction, as compared to an over-reaction or an under-reaction? Check one of the following:

-4	_____	extreme ***under***-reaction
-3	_____	strong ***under***-reaction
-2	_____	moderate ***under***-reaction
-1	_____	slight ***under***-reaction
0	_____	***very fitting*** reaction
+1	_____	slight ***over***-reaction
+2	_____	moderate ***over***-reaction
+3	_____	strong ***over***-reaction
+4	_____	extreme ***over***-reaction

11.) To what extent do you think that most other people would show their anger if they were in the same situation as you? Check one of the following:

-4	_____	most people would show ***very much less*** anger than I did
-3	_____	most people would show ***much less*** anger than I did
-2	_____	most people would show ***moderately less*** anger than I did
-1	_____	most people would show ***slightly less*** anger than I did
0	_____	most people would show the ***same amount*** of anger as I did
+1	_____	most people would show ***slightly more*** anger than I did
+2	_____	most people would show ***moderately more*** anger than I did
+3	_____	most people would show ***much more*** anger than I did
+4	_____	most people would show ***very much more*** anger than I did

12.) To what extent were you in control of how much anger you were showing (or not showing)?

not at all in control	0	1	2	3	4	5	6	7	8	very much in control

Appendix B

Study 1 – Introduction

Thank you for agreeing to participate in study "Regina." This research is being conducted by Shannon Howell under the supervision of Dr. Gerry Sande from the Department of Psychology at the University of Manitoba.

This study is designed to investigate the experience of common emotions. Specifically, we are interested in finding out about the kinds of things that lead people to feel certain emotions such as anger, sadness, happiness, and anxiety. We are also interested in how people perceive and remember their own emotional experiences.

For this study, you will be asked to recall and describe some emotions that you have recently experienced. The questionnaires that you will be given will ask you to recall specific kinds of emotions and to describe the circumstances in which they occurred. Then you will be asked some other specific questions about each emotional experience.

The questionnaires are fairly straight-forward, but here we would like to provide some detailed instructions about how to fill them out.

Each of you will receive four questionnaires. Each questionnaire asks the same questions about a different emotion. The emotions you will be asked about include: (1) anger, (2) anxiety, (3) happiness, and (4) sadness (not necessarily in that order). The first thing you will be asked to do on each questionnaire is to recall a specific time when you experienced the particular emotion and describe how you came to feel that way. When you do this, we would like you to pick a specific experience that you can remember well enough to describe in detail, and pick a <u>different</u> experience for each emotion. We are interested specifically in how you came to feel the emotion, so please describe the situation as clearly as possible.

You should also be aware that on the questionnaire we would like to know about your internal feelings or the way you felt inside <u>separately</u> from your display of the emotion or the way you showed it outwardly. The instructions on the questionnaires will make clear what we are asking about, so please read those carefully. Remember that we would like all descriptions to remain completely anonymous, so do not include any type of specific identifying information like names, etc.

Overall, it is very important that you fill out the questionnaires as *openly* and *honestly* as possible. Please know that there are absolutely no right or wrong answers to any of the questions, only your own thoughts about your own real emotions. Also please know that, although the questions ask about your own personal feelings, we are really interested in common trends that occur among people with respect to experiences and perceptions of emotions.

As with all Psychology experiment participation, we remind you that you are here on a voluntary basis and you are free to withdraw from this study at any time without penalty should you feel that you no longer wish to participate.

As you go through the questionnaires, please answer ALL of the questions in the order that they are asked. Feel free to ask the experimenter any questions you may have at any point during the study.

Appendix C

Study 1 – Post-Experimental Questionnaire

1) Did you have any difficulty recalling any particular emotions that you were asked about in this study?

(Circle One): Yes No

If Yes, please circle which one(s): anger anxiety happiness sadness

2) Did you have any difficulty describing your emotions in words?

(Circle One): Yes No

If Yes, why? (Check all that apply)

____ Emotions are very private, difficult to talk about

____ It's just hard to put those kinds of feelings into words

____ Other:

3) Did you have any difficulty answering the rating scale questions about the emotions?

Yes No

4) In this study you were asked to think about your internal feelings for an emotion, and then you answered some questions about your feelings. Next, you were asked to change your focus and think about how you showed the emotion, and then you answered the same types of questions about your show of emotion.

a) Were you able to separate your thinking about how you <u>felt</u> the emotion from how you <u>showed</u> the emotion?

Yes No

b) Did you have any particular ideas about how you were supposed to respond when you were asked the same questions twice for each emotion? In other words, did you have any particular ideas in mind when you responded to the same questions about showing the emotion as you did about feeling the emotion? Check one of the following:

_____ I thought I was supposed to respond <u>the same</u> to both sets of questions.

_____ I thought I was supposed to respond <u>differently</u> to each set of questions.

_____ I really didn't think about how I was supposed to respond – <u>I just answered the questions.</u>

5) Do you have any other questions or comments about this study? (Use the back of this form to respond)

Appendix D

Studies 1, 2, & 3 – Participation Consent Form

Before you begin this study, we would like to obtain your informed consent for participation. Your signature below indicates that you have read the above statement describing this study and that you are giving your informed consent to participate.

_____ _____

Printed Name Date

_____

Signature

Please turn in this page with your questionnaires. It will be removed immediately after this session, and all of your responses will remain completely anonymous.

Appendix E

Study 1 – Additional Consent Form

The study that you have just participated in is part of a program of research focussing on perceptions of emotions. The information that you have provided us with will help in understanding the way that people perceive and explain their own emotions. However, in addition to studying the ways in which people remember and perceive *their own* emotional experiences, we are also interested in examining the manner in which people perceive and explain *the emotions of others*. In order to do this, we would like to allow other participants in a future study to read about the emotional situations that you described in this study. Of course, this would be done in a *completely* anonymous fashion and you could never be personally identified.

Your signature below indicates that you have read the above statement and are giving your informed consent to allow the responses you provided to be used completely anonymously in a future study. Please feel free to ask the experimenter if you have any questions.

_____ _____

Printed Name Date

_____

Signature

Thank you again for your participation and for providing information about your personal emotional experiences. If you have found that describing your emotions has in any way been upsetting or disturbing to you, please be aware that the University Counselling Service is available for all students and can assist with these matters; the telephone number is 474-8592. Please call this number if you have any personal concerns that you would like to address.

Appendix F

Study 1 – Post-Experiment Information Sheet

In October of 2000, you participated in a study called "**Regina**." In that study you described four emotions that you recently experienced (anger, anxiety, happiness, and sadness), and then you answered rating scale questions about those emotions. The overall purpose of this study was to examine the ways in which people perceive and explain their own emotions.

In this study we used a self-report methodology. That is, we asked participants to describe their own emotions as they remembered them. The rating scale questions were designed to help us learn about how people perceive their own emotions in terms of how intense, how appropriate, and how controllable they think their feelings and displays of emotions are, what people think are the causes of their emotions, and how they think their emotions compare to other people's emotions. We also wanted to know if males and females would describe and explain their emotions differently. In addition, participants in this study were asked to sign consent forms allowing their responses to be used in subsequent research so that we could begin to look at how observers perceive the emotions of others.

Analysis of the data revealed that, overall, participants in this study reported emotions that they considered to be fairly intense as compared to mild. Feelings of happiness were rated as the most intense. Results also showed that females rated their emotions as slightly more intense than males did, especially for happiness and sadness. The actual differences in ratings were fairly small, however, although this type of gender difference is consistent with the results of other research which has shown that females tend to rate their emotions as more intense than males.

Results also showed that participants thought that their emotions were caused by particular events and people (external factors) more than their own personalities or moods (internal factors). In addition, participants rated their feelings and displays of emotion as appropriate as compared to under- or over-reactions, and they also thought that most other people would feel and show the same amount of emotion in the same situations. Ratings of control indicated that participants felt at least moderate control over their feelings and displays of emotion.

Although the results of this study provided a good deal of insight into how people perceive their own emotions, many questions remained unanswered. One of those questions was related to the finding of a gender difference in ratings of emotional intensity, with females rating their emotions as more intense than males. Here it seemed possible that females might have reported emotional *situations* or emotion *triggers* that were more intense, and as a result their reactions (and ratings of intensity) were correspondingly more intense. In order to examine this possibility, we typed up all of the emotion descriptions, made sure they were completely anonymous, and removed all

references to gender so that no one would be able to tell whether they were from male or female participants. Then a separate group of participants acted as observers and rated the descriptions on intensity. Results from this second, follow-up study revealed that only females' anger descriptions were rated as more intense than males' descriptions. Thus, differences in objective intensity of the emotional situations cannot fully account for the general finding that female participants rated their own emotions as more intense than males. Further research is being planned in order to replicate and extend these findings.

If you have any questions about this study, please feel free to contact Shannon Howell in P418 Duff Roblin or Dr. Gerry Sande in P505 Duff Roblin. Thank you again for your participation.

Appendix G

Study 2 – Questions for Objective Ratings

Following the description of emotional experience:

Think about the events that happened to this person while you answer the following questions:

1.) Choose a number on the following scale that describes the level of anger that would be most fitting to ***feel*** in this situation.

very *mild* annoyance or anger 0 1 2 3 4 5 6 7 8 very *intense* anger

moderate annoyance or anger

2.) Choose a number on the following scale that describes the level of anger that would be most fitting to ***show*** in this situation.

very *mild* annoyance or anger 0 1 2 3 4 5 6 7 8 very *intense* anger

moderate annoyance or anger

Following the description of emotional expression:

Think about how this person responded while you answer the following questions:

3.) To what extent was the amount of anger that this person ***felt*** in these circumstances a fitting reaction, as compared to an over-reaction or an under-reaction? Choose one of the following:

-4	_____	extreme ***under***-reaction
-3	_____	strong ***under***-reaction
-2	_____	moderate ***under***-reaction
-1	_____	slight ***under***-reaction
0	_____	***very fitting*** reaction
+1	_____	slight ***over***-reaction
+2	_____	moderate ***over***-reaction
+3	_____	strong ***over***-reaction
+4	_____	extreme ***over***-reaction

4.) To what extent was the amount of anger this person ***showed*** in these circumstances a fitting reaction, as compared to an over-reaction or an under-reaction? Choose one of the following:

-4	_____	extreme ***under***-reaction
-3	_____	strong ***under***-reaction
-2	_____	moderate ***under***-reaction
-1	_____	slight ***under***-reaction
0	_____	***very fitting*** reaction
+1	_____	slight ***over***-reaction
+2	_____	moderate ***over***-reaction
+3	_____	strong ***over***-reaction
+4	_____	extreme ***over***-reaction

Appendix H

Study 2 – Post-Experimental Questionnaire

1) Do you have any questions or comments about this study?

2) Is there anything that would have made the descriptions more realistic or easier to understand?

3) Did any anything strike you as unusual or not quite right as you read through the descriptions?

Circle One: *Yes* *No*

If Yes, please answer the following:

a.) How many descriptions seemed unusual or not quite right?

just one or two	a few - 10 or less	about half	well over half	all of them

b.) Briefly describe what was unusual about them:

4) Did you have any difficulty with the fact that the gender of the person who experienced the emotion was not identified in the descriptions you read?

Yes *No*

If Yes, briefly describe how might this have affected your responding:

5) I am: (circle one): female male

Appendix I

Study 2 – Introduction

Thank you for agreeing to participate in study "Regina." This research is being conducted by Shannon Howell under the supervision of Dr. Gerry Sande, Department of Psychology, University of Manitoba.

The study you are participating in is designed to investigate the experience of common emotions. Specifically, we are interested in finding out about the kinds of things that lead people to feel certain emotions such as anger, sadness, happiness, and anxiety. We are also interested in how people perceive the emotional experiences of others.

In previous studies that we have conducted, participants were asked to report on some emotions that they recently experienced. Specifically, participants in those studies were asked to describe a situation in which they felt a particular emotion, and then describe their response in that situation. Your task as a participant in this study will be to read some descriptions of emotional experience and then answer some questions about them. Of course, all of the descriptions that you will be reading are completely anonymous, and all of them have been typed with all personal identifying information completely removed. All of the descriptions are from different people, and none of them are related to one another in any way.

In this study you will be reading many emotion descriptions, all about the same type of emotion, and you will answer the same questions about each of them. Basically what's going to happen is that you're going to get a question booklet, and on the front of each page is a description of an EVENT that led to a particular kind of emotion. So you're going to read about that event, and then answer 2 questions about it. Then you're going to flip the page over, and read about a person's RESPONSE in that situation, and answer 2 questions about that. Then you'll move on to the next event.

Note that some of the questions ask about internal feelings or the way people feel inside, whereas other questions ask about external display or the way people show their feelings outwardly. **Please read the questions carefully to know what you are being asked about.**

Now for some of the questions, you will have little information upon which to base your answer, because whoever provided the description didn't give many details. In these cases it will be necessary for you to just rely on your best judgment. In everyday life we make these kinds of inferences all the time as we form impressions of people, and these are the kinds of things we are interested in for this study. So please just use your best judgment in answering the questions.

Remember that there are absolutely no right or wrong answers to any of the questions, only your own thoughts about the emotional situations that you are asked about.

As with all Psychology experiment participation, we remind you that you are here on a voluntary basis and you are free to withdraw from this study at any time without penalty should you feel that you no longer wish to participate. Further written information describing the nature and purpose of this study will be made available in your classroom later in the term.

As you go through the questionnaires, it is extremely important that you answer ALL of the questions. Feel free to ask the experimenter any questions you may have at any point during the study.

Appendix J

Study 2 – Post-Experiment Information Sheet

In October of 2000, you participated in a study called "**Regina**." In that study you read many emotion descriptions and you answered rating scale questions about them. The overall purpose of this study was to examine the ways in which people perceive particular emotional situations or emotion triggers. We also wanted to know, separately, how people perceived the feelings and displays of emotion that happened in response to those emotion triggers.

In a previous study we asked male and female students to describe particular emotions (anger, anxiety, happiness, and sadness) and then answer rating scale questions about them. One of the things we found was that females rated their emotions as more intense than males. Although this finding is in accord with other research on gender differences in reports of emotion, here it seemed possible that females might have reported emotional *situations* or emotion *triggers* that were more intense, and as a result their reactions were correspondingly more intense. In order to examine this possibility, we typed up all of the emotion descriptions, made sure they were completely anonymous, and removed all references to gender so that no one would be able to tell whether they were from male or female experiencers. Then a separate group of participants, of which you were a part, acted as observers and rated the descriptions on intensity. So in this study you read about people in emotional situations, but you didn't know whether it was a male or a female in those situations. Each emotional situation really was reported by either a male or a female student and we kept track of that information so we could see if new participants would rate the emotions reported by males as different from those reported by females. Each participant read about only one emotion type, either anger, anxiety, happiness, or sadness.

Overall, statistical analysis of the ratings from this study showed a gender difference only for the emotion of anger. That is, the anger descriptions that were from females were rated differently from the anger descriptions that were from males. Specifically, the anger descriptions from females were rated as more intense. The difference in ratings was not large, however, and overall, it appeared that the descriptions from females were rated as similar to the descriptions from males. Thus, differences in objective intensity of the emotional situations could not fully account for the general finding from the previous study that female participants rated their own emotions as more intense than males.

The ratings from the study you participated in also were used as the basis for constructing fictitious emotion stories that were used in subsequent research on the effects of gender stereotypes on perceptions of emotions. In addition, further research is being planned in order to follow up these all of the findings.

If you have any questions about this study, please feel free to contact Shannon Howell in P418 Duff Roblin or Dr. Gerry Sande in P505 Duff Roblin.
Thank you again for your participation.

Appendix K

Study 3 – Pre-Test Scenarios

Anger 1:

Recently a friend of mine asked to use my computer because theirs was broken. I have had a couple of bad experiences when other people used my computer in the past, but this friend said that they had an assignment due the next day and that it was an emergency. My friend promised to be very careful, so I said yes. The next day, I tried to use my computer and it wouldn't work properly anymore because this person had changed some settings and screwed everything up. Then I couldn't finish one of my assignments that I had due, and I lost marks because I had to hand it in late.

Mild Response:

I was a little annoyed when this happened. I didn't really do anything about it though. When my friend called me a couple of days later, I was kind of quiet, but that's about it.

Moderate Response:

I was pretty angry when this happened, and I didn't call my friend for a couple of days. Finally, I decided to tell my friend that I was angry because they caused me to get a lower mark on my assignment. I also said that I didn't want them to use my computer again.

Intense Response:

I was furious when this happened, and I felt like I never wanted to talk to my friend again. Finally, after several days of being very angry, I called them up. My friend wasn't home so I screamed into their answering machine. I called back later and did the same thing again, and I haven't talked to them since.

Anger 2:

I have worked at the same part-time job for 3 years. A couple of weeks ago, another person was hired in a position similar to mine. The new person was trained right away to do more jobs than I have been doing, even though I had been asking for more responsibilities for a long time now. I tried to ask the supervisor why the new person was getting more to do than me, but my supervisor just brushed me off. Later that day I found out that the new person is making 50 cents an hour more than me, even though I have been there way longer and I have always done a good job.

Mild Response:

I was a little annoyed when this happened. I didn't really do anything about it though. When I saw my supervisor or the new person, I was kind of quiet, but that's about it.

Moderate Response:

I was pretty angry when this happened. I decided right away to find out what was going on and made an appointment to see my supervisor. I asked why this new person was getting more money than me. When my supervisor didn't answer I said that I would have to consider looking for another job if I wasn't treated more fairly.

Intense Response:

I was furious when this happened. I stormed into my supervisor's office and demanded to know why this new person was getting more money than me. When my supervisor didn't answer, I yelled and called them a stupid ****, and I quit my job right there on the spot.

Anxiety 1:

Last June I was invited to a friend's wedding. Just a few days before the wedding, I found out that the person who I used to date was going to be there. We had broken up a couple of months earlier after being together for more than a year. I really cared for this person and our break-up was hard to deal with. I hadn't seen or talked to this person since we split up. Anyway, I didn't know if they were going to show up alone or with a date, and I was anxious about seeing them again.

Mild Response:

I felt a little nervous about this at first, but I didn't really let it bother me too much. I just told myself to get over it and to go and have a good time and enjoy the wedding. My friends said that it didn't seem to be bothering me much.

Moderate Response:

I felt pretty anxious about this, and I was kind of sick to my stomach. I wondered about what would happen if we ran into each other. My friends said that I seemed kind of nervous about it. After a few days I got used to the idea and tried not to worry about it so much.

Intense Response:

I felt extremely anxious about this, and I was completely sick to my stomach all the time. I couldn't stop thinking about what would happen if we ran into each other. My friends said that I looked like a nervous wreck. Finally, I decided to just stay home and miss my friend's wedding.

Anxiety 2:

Last April I had an interview for a summer job at a company that I really wanted to work for. I already had two interviews with other similar companies, but I got turned down both times. I was hoping that this kind of job might turn into a permanent position once I graduate because I really want to have a career in this field. The other interviews had been tough and the competition is pretty stiff, so I really wanted to be prepared and make a good impression at this one.

Mild Response:

I felt a little nervous about this at first, but it I didn't really let it bother me too much. In the days before, I just told myself to get over it and to be as relaxed as possible. My friends said that I didn't seem worried about it.

Moderate Response:

I felt pretty anxious about this. I had a bit of trouble falling asleep at night, and I kept wondering about how I could make a good impression. I talked to a couple of friends about it and they gave me some good advice. After a few days I got used to the idea and tried not to worry about it so much.

Intense Response:

I felt extremely anxious about this. I felt sick and couldn't sleep at night, and I couldn't stop thinking about how I could make a good impression. I talked to some friends about it, but nothing anybody said could help me to calm down. I just kept picturing myself completely blowing the interview.

Happiness 1:

There is someone at my work who I have known for 6 months and who I have come to like more and more. We get along really well and we have always been able to talk and joke around. I was sort of hoping that things might get romantic between us, but I never really thought that this person would be interested in me that way. Anyway, a couple of weeks ago we both stayed late to do some extra work. We talked a lot and had a good time, even though it was work. Later we decided to go out to a movie together sometime. We haven't gone out yet, but we are planning to soon.

Mild Response:

I was sort of glad when this happened, although I'm not really getting my hopes up. I just keep going about my work as usual, and I didn't bother to tell any of my friends about this.

Moderate Response:

I was pretty happy when this happened, and I am really looking forward to our date. I sometimes have a hard time concentrating on my work, and I feel good every time I think about this person. I have told a few close friends how excited I am about this.

Intense Response:

I was ecstatic when this happened, and I just can't wait for our date. I can hardly concentrate on my work anymore, and I daydream about this person constantly. I have told practically everyone I know how excited I am about this.

Happiness 2:

A few weeks ago I found out that I was going to receive some scholarship money to help pay for tuition this year. I was working hard in the summer and saved all I could, but the money situation had been getting a bit tight for me. At the last minute I applied for a small scholarship, but I didn't really think that I had a chance at it. Then one day I received a call from a person on the scholarship committee saying that my name had come up and that I would be receiving the money soon. It's not a lot, but the money will really help out this year.

Mild Response:

I was sort of glad when I received the call, but I didn't get too worked up about it. I told my friend about it a few days later when they asked if I had heard from the scholarship committee.

Moderate Response:

I was pretty happy when I received the call, and I thanked the person on the phone a couple of times. Then I phoned my best friend to share the news. We decided to go out for a drink later to celebrate.

Intense Response:

I was ecstatic when I received the call, and I thanked the person on the phone over and over again. Then I practically jumped for joy. I phoned everyone I know to share the good news, and I organized a party at my house to celebrate.

Sadness 1:

A couple of weeks ago I found out that the lady who lives next door has a serious illness. I haven't actually talked to her for quite a while, but she has lived next door to us for a really long time. I remember when I was young, I used to go over all the time and play with the other neighbourhood kids in her yard, and she would always invite me in for cookies and stuff. She was always so nice to me. Now she is sick and I don't know what will happen to her.

Mild Response:

I felt a little unhappy when I first heard about this, and I spent a few minutes reminiscing about the old days. I really haven't thought about her much recently though.

Moderate Response:

I felt pretty sad when I first heard about this, and I spent some time reminiscing about the old days. Now I feel sad whenever I think about her. She comes into my thoughts once in a while, especially when I pass by her house. I guess I've been kind of quiet around people lately.

Intense Response:

I felt extremely sad when I first heard about this, and I just couldn't help getting choked up. I kept reminiscing about the old days. Now I feel like crying whenever I think about her or talk about her, and she seems to come into my thoughts all the time. I guess I've been kind of sad around people lately.

Sadness 2:

Last month one of my best friends left town to go to university in the US. We have known each other since we were kids, and we're close friends even after all these years. My friend and I have the same interests, and it seems like I can just talk to this person about anything. We had been hanging out together a lot in the past year or so. The day finally came when my friend had to leave for school though, and I knew that I wouldn't be seeing this person for at least a year.

Mild Response:

I felt a little unhappy when my friend was leaving. It turns out that I was too busy to help pack up the car or see them off, so I called up my friend and said good-bye on the phone the day before.

Moderate Response:

I felt pretty sad when my friend was leaving, and I even felt myself getting teary-eyed. I helped pack up the car and we said our good-byes. I told my friend to try to call me when they could.

Intense Response:

I felt extremely sad when my friend was leaving, and I just couldn't help feeling choked up. I was way too upset to help pack up the car, so I said a short but very sad good-bye. I even (only half-joking) suggested that they change their mind and not go at all.

Appendix L

Study 3 – Pre-Test Sample Questionnaire

Event:

Recently a friend of mine asked to use my computer because theirs was broken. I have had a couple of bad experiences when other people used my computer in the past, but this friend said that they had an assignment due the next day and that it was an emergency. My friend promised to be very careful, so I said yes. The next day, I tried to use my computer and it wouldn't work properly anymore because this person had changed some settings and screwed everything up. Then I couldn't finish one of my assignments that I had due, and I lost marks because I had to hand it in late.

Think about the events that happened to this person while you answer the following questions:

1.) Choose a number on the following scale that describes the level of anger that would be most fitting to ***feel*** in this situation.

very *mild* annoyance or anger 0 1 2 3 4 5 6 7 8 very *intense* anger

moderate annoyance or anger

2.) Choose a number on the following scale that describes the level of anger that would be most fitting to ***show*** in this situation.

very *mild* annoyance or anger 0 1 2 3 4 5 6 7 8 very *intense* anger

moderate annoyance or anger

Response:

I was a little annoyed when this happened. I didn't really do anything about it though. When my friend called me a couple of days later, I was kind of quiet, but that's about it.

Think about how this person responded while you answer the following questions:

3.) To what extent was the amount of anger that this person ***felt*** in these circumstances a fitting reaction, as compared to an over-reaction or an under-reaction? Choose one of the following:

-4	_____	extreme ***under***-reaction
-3	_____	strong ***under***-reaction
-2	_____	moderate ***under***-reaction
-1	_____	slight ***under***-reaction
0	_____	***very fitting*** reaction
+1	_____	slight ***over***-reaction
+2	_____	moderate ***over***-reaction
+3	_____	strong ***over***-reaction
+4	_____	extreme ***over***-reaction

4.) To what extent was the amount of anger this person ***showed*** in these circumstances a fitting reaction, as compared to an over-reaction or an under-reaction? Choose one of the following:

-4	_____	extreme ***under***-reaction
-3	_____	strong ***under***-reaction
-2	_____	moderate ***under***-reaction
-1	_____	slight ***under***-reaction
0	_____	***very fitting*** reaction
+1	_____	slight ***over***-reaction
+2	_____	moderate ***over***-reaction
+3	_____	strong ***over***-reaction
+4	_____	extreme ***over***-reaction

Appendix M

Study 3 – Pre-Test Introduction

Thank you for agreeing to participate in study "Regina." This research is being conducted by Shannon Howell under the supervision of Dr. Gerry Sande, Department of Psychology, University of Manitoba.

The study you are participating in is designed to investigate the experience of common emotions. Specifically, we are interested in finding out about the kinds of things that lead people to feel certain emotions such as anger, sadness, happiness, and anxiety. We are also interested in how people perceive the emotional experiences of others.

In previous studies that we have conducted, participants were asked to report on some emotions that they recently experienced. Specifically, participants in those studies were asked to describe a situation in which they felt a particular emotion, and then describe their response in that situation. Your task as a participant in this study will be to read some descriptions of emotional experience and then answer some questions about them. Of course, all of the descriptions that you will be reading are completely anonymous, and all of them have been typed with all personal identifying information completely removed. All of the descriptions are from different people, and none of them are related to one another in any way.

In this study you will be reading several emotion descriptions, and you will answer the same questions about each of them. Basically what's going to happen is that you're going to get a questionnaire booklet, and on the front of each page is a description of an EVENT that led to a particular kind of emotion. On the back of each page is a description of a response in the situation. What you're going to do is read about an event, and then answer 2 questions about it. Then you're going to flip the page over and read about a person's RESPONSE in that situation, and answer 2 questions about that. Then you'll move on to the next event.

Note that some of the questions ask about internal feelings or the way people **feel** inside, whereas other questions ask about external display or the way people **show** their feelings outwardly. **Please read the questions carefully to know what you are being asked about.**

Now sometimes it will be necessary for you to just rely on your best judgment when answering the questions, because you will have limited information upon which to base your answers. In everyday life we make these kinds of inferences all the time as we form impressions of people, and these are the kinds of things we are interested in for this study. So please just use your best judgment in answering the questions.

Remember that there are absolutely no right or wrong answers to any of the questions, only your own thoughts about the emotional situations that you are asked about.

As with all Psychology experiment participation, we remind you that you are here on a voluntary basis and you are free to withdraw from this study at any time without penalty should you feel that you no longer wish to participate. Further written information describing the nature and purpose of this study will be made available in your classroom later in the term.

As you go through the questionnaires, it is extremely important that you answer ALL of the questions. Feel free to ask the experimenter any questions you may have at any point during the study.

Appendix N

Study 3 – Pre-Test Results

	Objective Intensity of Feeling		Objective Intensity of Display	
	Male Participants	Female Participants	Male Participants	Female Participants
Anger 1	6.55	6.70	5.48	5.61
Anger 2	6.62	7.06	4.69	5.30
Anxiety 1	6.07	5.76	3.38	3.27
Anxiety 2	6.17	6.21	2.86	3.45
Happiness 1	5.97	6.27	5.31	4.82
Happiness 2	6.28	6.85	5.62*	6.61*
Sadness 1	5.31	5.39	5.07	4.73
Sadness 2	6.07	6.39	5.17*	6.18*

* Indicates significant gender difference at $p < .01$.

Continued . . .

Study 3 Pre-Test Results cont.

		Fittingness of Feeling		Fittingness of Display	
		Male Participants	Female Participants	Male Participants	Female Participants
Anger 1	Mild	-1.67	-1.46	-2.22	-2.46
	Moderate	.00	.45	.00	.55
	Intense	1.20	1.89	2.30	3.22
Anger 2	Mild	-1.40	-1.78	-1.30*	-2.44*
	Moderate	.67*	-.23*	1.22*	-.31*
	Intense	.80	1.27	2.60	3.18
Anxiety 1	Mild	-.30	.09	.30	.00
	Moderate	.20	1.00	.80	.78
	Intense	2.11	2.38	3.00	2.77
Anxiety 2	Mild	-.56	-1.08	.00	-.69
	Moderate	.20	.36	.40	.27
	Intense	1.20	1.33	2.80	1.89
Happiness 1	Mild	-.50	-.33	-.80	-.89
	Moderate	.33	.23	.33	.62
	Intense	1.10	1.91	2.20	2.45
Happiness 2	Mild	-.70	-1.64	-.80*	-2.00*
	Moderate	-.40	.00	-.10	.11
	Intense	1.67	1.38	2.89	1.62
Sadness 1	Mild	-1.22	-1.46	-1.56	-1.46
	Moderate	.20	.09	.30	.36
	Intense	.70	.78	1.10	1.22
Sadness 2	Mild	-1.30	-.89	-1.70	-1.78
	Moderate	.11	-.54	.56*	-.69*
	Intense	.80*	.09*	.40	-.27

* Indicates gender differences significant at $p < .05$.

Appendix O

Study 3 – Final Scenarios

Anger:

Recently a friend of mine asked to use my computer because theirs was broken. I have had a couple of bad experiences when other people used my computer in the past, but this friend said that they had an assignment due the next day and that it was an emergency. My friend promised to be very careful, so I said yes. The next day, I tried to use my computer and it wouldn't work properly anymore because this person had changed some settings and screwed everything up. Then I couldn't finish one of my assignments that I had due, and I lost marks because I had to hand it in late.

Mild Response:

I was a little annoyed when this happened. I didn't really do anything about it though. When my friend called me a couple of days later, I was kind of quiet, but that's about it.

Moderate Response:

I was pretty angry when this happened, and I didn't call my friend for a couple of days. Finally, I decided to tell my friend that I was angry because they caused me to get a lower mark on my assignment. I also said that I didn't want them to use my computer again.

Intense Response:

I was furious when this happened, and I felt like I never wanted to talk to my friend again. Finally, after several days of being very angry, I called them up. My friend wasn't home so I screamed into their answering machine. I called back later and did the same thing again, and I haven't talked to them since.

Anxiety:

Last April I had an interview for a summer job at a company that I really wanted to work for. I already had two interviews with other similar companies, but I got turned down both times. I was hoping that this kind of job might turn into a permanent position once I graduate because I really want to have a career in this field. The other interviews had been tough and the competition is pretty stiff, so I really wanted to be prepared and make a good impression at this one.

Mild Response:

I felt a little nervous about this at first, but I didn't really let it bother me. I just told myself to get over it and to be as relaxed as possible. My friends said that I didn't seem worried about it at all.

Moderate Response:

I felt pretty anxious about this. I had a bit of trouble falling asleep at night, and I kept wondering about how I could make a good impression. I talked to a couple of friends about it, and they gave me some good advice. After a few days I got used to the idea and tried not to worry about it so much.

Intense Response:

I felt extremely anxious about this. I felt sick and couldn't sleep at night, and I couldn't stop thinking about how I could make a good impression. I talked to some friends about how nervous I was, but nothing anybody said could help me to calm down. I just kept picturing myself completely blowing the interview, and I even considered not going at all.

Happiness:

There is someone at my work who I have known for 6 months and who I have come to like more and more. We get along really well and we have always been able to talk and joke around. I was sort of hoping that things might get romantic between us, but I never really thought that this person would be interested in me that way. Anyway, a couple of weeks ago we both stayed late to do some extra work. We talked a lot and had a good time, even though it was work. Later we decided to go out to a movie together sometime. We haven't gone out yet, but we are planning to soon.

Mild Response:

I was sort of glad when this happened, although I'm not really getting my hopes up. I just keep going about my work as usual, and I didn't bother to tell any of my friends about this.

Moderate Response:

I was pretty happy when this happened, and I am really looking forward to our date. I sometimes have a hard time concentrating on my work, and I feel good every time I think about this person. I have told a few close friends how excited I am about this.

Intense Response:

I was ecstatic when this happened, and I just can't wait for our date. I can hardly concentrate on my work anymore, and I daydream about this person constantly. I have told practically everyone I know how excited I am about this.

Sadness:

A couple of weeks ago I found out that the lady who lives next door has a serious illness. I haven't actually talked to her for quite a while, but she has lived next door to us for a really long time. I remember when I was young, I used to go over all the time and play with the other neighbourhood kids in her yard, and she would always invite me in for cookies and stuff. She was always so nice to me. Now she is sick and I don't know what will happen to her.

Mild Response:

I felt a little unhappy when I first heard about this, and I spent a few minutes reminiscing about the old days. I really haven't thought about her much recently though.

Moderate Response:

I felt pretty sad when I first heard about this, and I spent some time reminiscing about the old days. Now I feel sad whenever I think about her. She comes into my thoughts once in a while, especially when I pass by her house. I guess I've been kind of quiet around people lately.

Intense Response:

I felt extremely sad when I heard about this, and for a long time I just couldn't help getting choked up. I missed some classes because I couldn't concentrate, and I kept reminiscing about the old days. Now I feel like crying whenever I think about her, and she seems to come into my thoughts all the time. My friends say I seem very sad lately.

Appendix P

Study 3 – Sample Questionnaire

In previous studies that we have conducted, students were asked to describe some emotions that they recently experienced. Below is a description that was reported by a female student for the emotion of ***anger****. This description was chosen randomly and was copied onto this page. As a participant in this study, we would like you to read this person's description, and then answer some questions about her anger.*

Recently a friend of mine asked to use my computer because theirs was broken. I have had a couple of bad experiences when other people used my computer in the past, but this friend said that they had an assignment due the next day and that it was an emergency. My friend promised to be very careful, so I said yes. The next day, I tried to use my computer and it wouldn't work properly anymore because this person had changed some settings and screwed everything up. Then I couldn't finish one of my assignments that I had due, and I lost marks because I had to hand it in late.

I was a little annoyed when this happened. I didn't really do anything about it though. When my friend called me a couple of days later, I was kind of quiet, but that's about it.

Please turn the page.

Now we would like you to answer some questions about the feeling of anger that this person experienced.

*The first set of questions ask about this person's INTERNAL **FEELINGS** or THE WAY YOU THINK **SHE FELT INSIDE**.*

1.) Circle a number on the following scale that best describes how intense you think this person's feeling of anger was.

very *mild* annoyance or anger 0 1 2 3 4 5 6 7 8 very *intense* anger

moderate annoyance or anger

2.) To what extent do you think this person's anger was the result of some specific event (for example, something that happened to her or something that someone else did)?

not at all 0 1 2 3 4 5 6 7 8 very much

3.) To what extent do you think this person's anger was the result of something about her (such as her personality or the mood she was in before she became angry)?

not at all 0 1 2 3 4 5 6 7 8 very much

4.) To what extent do you think the amount of anger this person was feeling in these circumstances was a fitting reaction, as compared to an over-reaction or an under-reaction?

-4	_____	extreme ***under***-reaction
-3	_____	strong ***under***-reaction
-2	_____	moderate ***under***-reaction
-1	_____	slight ***under***-reaction
0	_____	***very fitting*** reaction
+1	_____	slight ***over***-reaction
+2	_____	moderate ***over***-reaction
+3	_____	strong ***over***-reaction
+4	_____	extreme ***over***-reaction

5.) To what extent do you think that most other people would feel the same amount of anger as this person did if they were in the same situation?

-4	_____	most people would feel ***very much less*** anger than she did
-3	_____	most people would feel ***much less*** anger than she did
-2	_____	most people would feel ***moderately less*** anger than she did
1	_____	most people would feel ***slightly less*** anger than she did
0	_____	most people would feel the ***same amount*** of anger as she did
+1	_____	most people would feel ***slightly more*** anger than she did
+2	_____	most people would feel ***moderately more*** anger than she did
+3	_____	most people would feel ***much more*** anger than she did
+4	_____	most people would feel ***very much more*** anger than she did

6.) To what extent do you think this person was in control of the amount of anger she was feeling inside?

not at all 0 1 2 3 4 5 6 7 8 very much

*The next set of questions ask about the way this person **EXPRESSED** her anger or THE WAY **SHE SHOWED IT OUTWARDLY**. This can mean the way she looked, the way she acted, what she said, and what she did in the situation.*

7.) To what extent did this person show her anger outwardly? Circle a number on the following scale that best describes how intense her expression of anger was.

very *mild* annoyance or anger 0 1 2 3 4 5 6 7 8 very *intense* anger

moderate annoyance or anger

8.) To what extent do you think the amount of anger this person was showing in these circumstances was a fitting reaction, as compared to an over-reaction or an under-reaction?

-4	_____	extreme ***under***-reaction
-3	_____	strong ***under***-reaction
-2	_____	moderate ***under***-reaction
-1	_____	slight ***under***-reaction
0	_____	***very fitting*** reaction
+1	_____	slight ***over***-reaction
+2	_____	moderate ***over***-reaction
+3	_____	strong ***over***-reaction
+4	_____	extreme ***over***-reaction

9.) To what extent do you think that most other people would show their anger if they were in the same situation?

-4	_____	most people would show ***very much less*** anger than she did
-3	_____	most people would show ***much less*** anger than she did
-2	_____	most people would show ***moderately less*** anger than she did
-1	_____	most people would show ***slightly less*** anger than she did
0	_____	most people would show the ***same amount*** of anger as she did
+1	_____	most people would show ***slightly more*** anger than she did
+2	_____	most people would show ***moderately more*** anger than she did
+3	_____	most people would show ***much more*** anger than she did
+4	_____	most people would show ***very much more*** anger than she did

10.) To what extent do you think this person was in control of how much anger she was showing (or not showing)?

not at all 0 1 2 3 4 5 6 7 8 very much

Appendix Q

Study 3 – Post-Experimental Questionnaire

1) Do you have any questions or comments about this study?

2) Is there anything that would have made the descriptions more realistic or easier to understand?

3) Did anything strike you as unusual or not quite right as you read through the descriptions?

   Circle One: *Yes* *No*

   If Yes, briefly describe what was unusual about them:

4) Did you have any difficulty answering the rating scale questions about the emotions?

   Yes No

5) In this study you were asked to think about how a person was feeling inside for an emotion, and then you answered some questions about their feelings. Next, you were asked to change your focus and think about how the person showed the emotion, and then you answered the same types of questions about their show of emotion.

   c) Were you able to separate your thinking about how the person felt the emotion from how the person showed the emotion?

   Yes No

d) Did you have any particular ideas about how you were supposed to respond when you were asked the same questions twice for each emotion? In other words, did you have any particular ideas in mind when you responded to the same questions about showing the emotion as you did about feeling the emotion? Check one of the following:

_____ I thought I was supposed to respond the same to both sets of questions.

_____ I thought I was supposed to respond differently to the sets of questions.

_____ I really didn't think about how I was supposed to respond – I just answered the questions.

6) I am: (circle one): female male

Appendix R

Study 3 – Introduction

Thank you for agreeing to participate in study "Regina." This research is being conducted by Shannon Howell under the supervision of Dr. Gerry Sande, Department of Psychology, University of Manitoba.

The study you are participating in is designed to investigate the experience of common emotions. Specifically, we are interested in finding out about the kinds of things that lead people to feel certain emotions such as anger, sadness, happiness, and anxiety. We are also interested in how people perceive the emotional experiences of others.

In previous studies that we have conducted, participants were asked to report on some emotions that they recently experienced. Specifically, participants in those studies were asked to describe a situation in which they felt a particular emotion, and then describe their response in that situation. Your task as a participant in this study will be to read some descriptions of emotional experience, and then answer some questions about them. Of course, all of the descriptions that you will be reading are completely anonymous, and all of them have been typed with all personal identifying information completely removed. The descriptions you will be asked to read concern 4 different emotions (anger, anxiety, happiness, and sadness), and you will answer the same questions for all of them. All of the descriptions are from different people, and none of the descriptions are related to one another in any way.

After you read a description and start answering the questions, please note that some of the questions ask about internal feelings or the way people **feel** inside, whereas other questions ask about external display or the way people **show** their feelings outwardly. **Please read the questions carefully to know what you are being asked about.**

You should know that sometimes it will be necessary for you to just rely on your best judgment when answering the questions, because you will have limited information upon which to base your answers. In everyday life we make these kinds of inferences all the time as we form impressions of people, and these are the kinds of things we are interested in for this study. So please just think about the questions carefully and use your best judgment in answering the questions.

Remember that there are absolutely no right or wrong answers to any of the questions, only your own thoughts about the emotional situations that you are asked about. Overall, it is very important that you fill out the questionnaires as openly and honestly as possible. As with all Psychology experiment participation, we remind you that you are here on a voluntary basis and you are free to withdraw from this study at any time without penalty should you feel that you no longer wish to participate.
As you go through the questionnaires, please answer ALL of the questions. Feel free to ask the experimenter any questions you may have at any point during the study.

Appendix S

Study 3 – Post-Experiment Information Sheet

In October or November of 2000, you participated in a study called "**Regina**." In that study, you read about several emotional events and answered rating scale questions about them. The overall purpose of this study was to examine the ways in which people perceive and explain the emotions of others. Another purpose was to investigate the influence of gender stereotypes on perceptions and explanations of emotions. Research on gender stereotypes of emotion has shown that women are perceived to both feel and show more emotion than men. We wanted to know more specifically how such stereotypes affect certain perceptions of emotions.

There actually were two parts to this study, and each of you participated in only one part. In the first part of the study, participants read about eight emotional situations (two each for anger, anxiety, happiness, and sadness) and then answered a series of brief questions about them. The emotion situations were based loosely on real reported emotions from a previous study, and the questions asked about the intensity of emotion that would be most fitting to feel in each situation and the intensity of emotion that would be most fitting to show in each situation. Participants also read about a particular emotional response in each situation and answered questions about how appropriate the person's feeling and display of emotion was in each situation. Although all participants read about the same eight emotional situations, participants did not all read about the same response in each situation because some responses were created to be mild reactions, some were created to be moderate reactions, and some were created to be intense reactions. Gender of the person who experienced the emotion was not identified in the stories.

The purpose of asking participants to make these ratings was to obtain "pre-test" or "baseline" ratings of the emotion stories with the effects of gender removed. That is, we wanted to know how intense the emotional situations were and how fitting the responses were perceived to be before we used the stories in the next part of the study in which the effects of gender stereotypes on perceptions of emotions were examined. On the basis of these ratings, we picked four emotion stories (one each for anger, anxiety, happiness, and sadness) to be used in the next part of the study.

In the second part of the study we used an experimental methodology in which several variables were manipulated. The emotional situations that you read about were based loosely on real reported emotions, except we did modify them in different ways in order to achieve our experimental manipulations. One of the variables that we manipulated was gender of the person in the situation, or "target gender". So some of you read about females in the emotional situations, and others read about males in the emotional situations. However, everyone who participated in this study actually read about the same four emotional situations, one each for anger, anxiety, happiness, and sadness. Another variable that we manipulated was intensity of the emotional reaction. So some of you read about mild responses to those situations, some read about moderate responses, and

some read about strong responses. Of course both males and females participated in this study, so participant gender was another variable in the study. All participants answered the same questions about the emotions, which asked about how intense, how appropriate, and how controllable you thought the feelings and displays of emotions were, what you thought the causes of the emotions were, and how you thought the emotions compared to other people's emotions. So in this study we wanted to find out how the intensity of the emotional response might affect perceptions of emotions, and whether the emotions of males and females would be perceived and explained differently.

Analysis of the results showed significant effects for intensity of the emotional reaction; that is mild responses were rated as different from moderate responses which in turn were rated as different from intense responses. This was not really surprising given that the responses were constructed to be different from one another. No effects due to target gender were found, however, even though such effects were expected on the basis of the strong and pervasive stereotypes which suggest that men and women differ in characteristic emotionality. The lack of stereotype effects is somewhat inconsistent with other research which has shown that men and women are perceived to differ in their emotional reactions. Further research is being planned in order to further examine this issue.

If you have any questions about this study, please feel free to contact Shannon Howell in P418 Duff Roblin or Dr. Gerry Sande in P505 Duff Roblin.

Thank you again for your participation.