Self-Reflection:

Its Impact on Self-Concept Clarity and Affect

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A Thesis

in

The Department

of

Psychology

Presented in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy at
Concordia University
Montreal, Quebec, Canada

December, 1995

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ABSTRACT

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Individual differences in the degree to which self-beliefs are clearly and confidently defined have been identified in previous research. Individuals high in Chronic Self-Clarity appear motivated by a need to maintain a sense of coherence regarding the self, whereas individuals low in Chronic Self-Clarity seem to seek out self-relevant information to attain greater clarity. The present research addresses the hypothesis that self-reflection reduces the self-clarity of individuals high in Chronic Clarity and increases the self-clarity of individuals low in Chronic Clarity. In Study 1, high and low Chronic Clarity subjects were either led to reflect upon their self-beliefs or were distracted from self-reflection. Self-reflection was induced in the reflection condition by having subjects respond to questions regarding what they are like and why they are the way they are. Results of Study 1 reveal that following self-reflection women high in Chronic Clarity experienced decreased clarity, whereas women low in Chronic Clarity tended to evidence increased clarity. For men, reflection did not significantly influence self-clarity. These findings were fully replicated in Study 2. Specifically, high Clarity

women evidenced decreased self-clarity and low Clarity women evidenced increased self-clarity following self-reflection. To address the results of Studies 1 and 2, Study 3 explored gender differences in the propensity to engage in self-reflection. As hypothesized, women reported engaging in self-reflection more frequently than men in their day to day lives. As well, heightened self-reflection was found to be positively related to reduced self-clarity for women but not for men. In concert, the present studies suggest that self-reflection is more relevant for women's understanding and clarity of self than for men. Results are discussed with respect to gender socialization and identity, self-reflective processes, and the potential benefits of self-reflection for psychological adjustment.

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Is there a self? If so, what is its nature? Is it

continuous, discontinuous, built around a core, or is the

sense of core a necessary illusion to keep us going in the

face of the self's diverse and multifarious existence,

which cannot be said to be singular in its striving toward

wholeness and completion? Does the self fragment? Does it

have structure? Is this structure a cognitive overlay that

disguises inherent disintegration? Is the self an

illusion?

Mind observing itself is mind changing itself.

Kim Chernin (1995)

This thesis is dedicated to the loving memory of my parents Jean Rae Csank and Joseph Zoltan Csank - for their love, humanity, and soulful example, I thank them.

Self-Reflection:

Its Impact on Self-Concept Clarity and Affect

The knowledge that individuals have of themselves constitutes their self-concept. Such knowledge can include personality traits (e.g., intelligent, sociable), attitudes and values (e.g., environmentalist), and physical characteristics (e.g., tall). The self-concept has been generally construed as a cognitive schema or an organized knowledge structure that directs the processing of information relevant to the self (Kihlstrom & Cantor, 1984; Neisser, 1988). The self-concept is thought to play an active role in the interpretation of experience and regulation of behavior, being at once the self as "knower" that processes information about the self, and the self as "known," consisting of one's self-beliefs and self-knowledge (Markus & Wurf, 1987).

Individuals likely devote some time to thinking about themselves, who they are, their characteristics, values, and behaviors, and contemplating why or how they have become who they are. Self-reflection is thought to contribute to one's sense of self and enable the individual to make meaningful choices and to behave autonomously (cf. Vallacher, 1980). The self-concept and the ability to reflect upon the self are thought to develop concurrently as children learn to take the perspective of others

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(Cooley, 1902/1964; Mead, 1934) or as they come to recognize the self as an agent of action (Duval & Wicklund, 1972). Identity theorists such as Erikson (1980) assume that self-reflection is necessary for the development and definition of a clear and stable identity. Psychoanalytic theory (e.g., Freud, 1949; Jung, 1964), which has had an enduring and profound influence on Western thought, also emphasizes the importance of reflection upon and analysis of the self for the development of increased self-knowledge. The idea that self-reflection may promote insight regarding the self has a historical basis in Western thought (Baumeister, 1986; 1987; Martin, Gutman, & Hutton, 1988). It appears that self-reflection came to be accepted as a possible means of knowing the self in approximately the 16th century when the idea emerged that the self is hidden within the person (Baumeister, 1987; Foucault, 1988). Presently, the popular belief continues that an inward searching can reveal the true inner self and increase self-understanding (Baumeister, 1986).

Self-reflection may be construed as the process of deliberating about the self, questioning what one is like and how or why one has come to be who one is. As such, self-reflection can involve thinking about and questioning oneself concerning one's past behaviors and social interactions, one's characteristics, attitudes, and emotions. Self-reflection may be construed as a deliberate

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and conscious activity that likely requires considerable attentional resources (cf. Hasher & Zacks, 1979). It may be difficult for individuals to engage in self-reflection when they are involved in other tasks that also require such resources. Hence, individuals are apt to engage in self-reflection when they are alone and free of external distraction. Indeed, solitude has long been considered a prerequisite condition for self-exploration (Storr, 1988). As employed in various mystical practices, self-reflection may be provoked by individuals asking themselves fundamental questions such as "Who am I?", "What am I?", or "Why am I?" (Deikman, 1982). This type of self-questioning is also observed in the existential self-reflection employed by philosophers such as Kierkegaard and Nietzsche (Jaspers, 1955) and, in a rather cogent form, in the post-modern autobiography (e.g., Barthes, 1989). Self-reflection also appears to be involved in the life review process of many older individuals (Butler, 1963; Fallot, 1980). The life review process is said to allow older individuals an assessment of their accomplishments and contributions and is thought to promote consolidation of identity (Butler, 1963).

How might self-reflection influence the way individuals perceive and understand themselves? From the perspective of identity theorists and psychoanalysis, self-reflection may be expected to contribute to increased

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certainty and clarity of self-beliefs. As described above, the life review process of older individuals is also thought to promote personality integration and identity development in later life. One can also argue, however, that self-reflection may sometimes undermine one's self-understanding and foster heightened confusion and doubt regarding the self. Indeed, research suggests that reflecting on one's own feelings and problems, a component of self-reflection, may exacerbate current negative feelings and interfere with one's ability to attend to present concerns (Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema, 1991). In addition, although dysphoric individuals are highly self-reflective they seem less aware of their thoughts and feelings than nondysphoric individuals (Csank & Conway, 1994), which suggests that self-reflection may not lead to greater clarity concerning the self. That potential confusion and angst may result from self-reflection is also reflected in the works of many poets and philosophers (cf. Dudek, 1967; Jaspers, 1955).

There is a dearth of research on the relevance of self-reflection for individuals' understanding and knowledge of themselves. It may be that both the positive and negative consequences of self-reflection as entertained above may occur for different individuals under different circumstances. Perhaps certain individuals respond to self-reflection with increased clarity and self-

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understanding whereas others respond with greater confusion regarding the self. One factor that is likely to moderate the influence of self-reflection on the clarity of self-beliefs is an individual's chronic sense of self or self-representation. Specifically, individuals who already have a clear and coherent sense of self may respond quite differently to self-reflection than individuals who are less certain regarding their self-beliefs.

Self-Concept Clarity

Some individuals seem to hold very well-defined and stable self-beliefs whereas others have self-beliefs that are more diffuse and ambiguous. For instance, among the many people who consider themselves to be intelligent, some are far less clear or certain than others about this self-belief. Research has recently addressed the nature of self-concept clarity. Individuals with unclear self-beliefs are more likely to change their self-descriptions over time, relative to individuals with a clear sense of self (Campbell, Trapnell, Heine, Katz, & Lavallee, 1994). As well, heightened confusion regarding the self is associated with self-descriptions that are contradictory or inconsistent. For example, individuals who have an unclear sense of self might define themselves as being sociable and unsociable or boring and interesting, at the same time. The extent to which self-beliefs are clearly and confidently defined is related to how individuals feel

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about themselves and how they interpret self-relevant information (Campbell, 1990; Maracek & Mettee, 1972; Pelham, 1991). For example, confusion regarding one's sense of self is associated with heightened dysphoria (Campbell et al., 1994). As well, induced self-confusion has been found to undermine individuals' ability to employ decision making strategies that involve the use of the self to direct one's choices (Setterlund & Niedenthal, 1993).

Individual differences in self-clarity have been identified using various self-report techniques. For example, self-clarity has been operationalized by asking individuals to rate themselves in terms of self-descriptive trait adjectives and then to indicate the degree to which their self-description may fluctuate or vary for each trait dimension (Baumgardner, 1990). The latitude or range of fluctuation in self-description across several trait ratings is indicative of an individual's degree of self-certainty. A large latitude of self-description is taken to reflect less self-certainty whereas a small latitude is taken to indicate greater certainty. Another approach that has been used is to ask individuals to rate how certain they are of their self-descriptions as assessed by personality measures and measures of self-esteem (e.g., Maracek & Mettee, 1972).

Recently, Campbell (1990; Campbell et al., 1994), has developed a face valid measure of global self-concept

clarity. The Self-Concept Clarity Scale (SCCS; Campbell et al., 1994) assesses the extent to which an individual's self-beliefs are confidently defined, temporally stable and internally consistent. SCCS items are face valid (e.g., "In general, I have a clear sense of who I am"; "My beliefs about myself seem to change very frequently"; "When I think about what kind of person I have been in the past, I'm not sure what I was really like"). High scores on the SCCS reflect lower self-clarity or greater self-confusion. In support of the measure's construct validity, individuals low in self-clarity report reduced awareness of thoughts and feelings (Campbell et al., 1994). As a global measure, the SCCS allows for an assessment of individual differences in self-clarity that is not specific to any one particular trait dimension or self-description.

Little is known about what underlies self-clarity and how individuals develop a certain level of clarity regarding self-beliefs. One might expect that judgments of self-concept clarity are derived from an exhaustive evaluation of one's autobiographical knowledge concerning the stability and consistency of self-beliefs and behavior. Recent research, however, suggests that behavioral episodes or autobiographical experiences are not usually activated when making abstract judgments about the self or one's characteristics (Klein & Loftus, 1993). Although certain individuals may feel that their self-beliefs are clearly

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and confidently defined, judgments of self-clarity may not necessarily be derived from a comprehensive appraisal of one's knowledge about the self (cf. Campbell et al., 1994). For example, individuals who feel very certain, clear, and confident about being sociable may not necessarily have behaved in a sociable manner across situations or over time, and they may, in fact, have behaved rather unsociably on a number of occasions. Conversely, individuals who feel unsure and confused about whether they are sociable may actually have behaved quite sociably across many situations, over time, and may rarely be unsociable. In essence, judgments of self-concept clarity reflect an abstract belief or hypothesis about the self that may not always correspond to specific aspects of behavior or experience.

A number of factors can influence how individuals appraise their own experiences and thereby construe themselves with a certain degree of clarity. In particular, reasoned evaluations of one's experiences often appear selective and may be influenced by present motivational concerns (Kunda, 1990). Motivation appears to influence how individuals access information, construct and evaluate their beliefs and may guide individuals' hypothesis-testing regarding the self (Kunda, 1990). Individuals may arrive at self-clarity judgments through such a motivated reasoning process. For certain

individuals, the motivational component may involve a desire to maintain certainty and clarity regarding the self whereas others may seek to attain greater self-clarity (cf. Rokeach, 1960; Sorrentino & Short, 1986). Individuals high in self-clarity may not readily acknowledge or want to confront information about the self that would reveal inconsistency and unclarity. That is, individuals high in self-clarity may be defensive as they are motivated to maintain self-clarity. In contrast, individuals low in self-clarity may be more accepting of inconsistent information regarding the self and may make less defensive judgments of their own clarity. The motivation to seek out and attain greater self-clarity may underlie low clarity individuals' relatively uncensored acceptance of a wide range of self-relevant information (cf. Campbell & Lavallee, 1993).

The view that individuals higher in self-clarity may be more defensive and may disregard information that implies ambiguity regarding the self is congruous with descriptions of individuals high in self-esteem. Specifically, individuals high in self-esteem have been found to employ a number of self-enhancing strategies to maintain positive self-regard (cf. Taylor & Brown, 1988; 1994; Tennen & Herzberger, 1987). Individuals with high self-esteem evidence strategies for dealing with their experiences that at one level are self-enhancing and yet at

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another seem costly for adaptive social functioning and may not reflect adjustment (Colvin & Block, 1994; Tennen & Affleck, 1993). High self-esteem individuals appear more defensive than low self-esteem individuals when they are faced with threats to their self-esteem (Tennen & Affleck, 1993). For example, high self-esteem individuals tend to attribute misfortunes and negative outcomes to external factors and circumstances, and tend not to acknowledge their own contribution to such outcomes, relative to low self-esteem individuals. In addition, high self-esteem individuals tend to selectively attend to social and environmental cues that are consistent with their positive self-views and disregard other self-relevant information (Campbell & Lavallee, 1993). In contrast, low self-esteem individuals appear to be responsive to self-relevant information conveyed by their social environment. The view endorsed here contrasts with the alternate view that the self-enhancing strategies associated with high self-esteem must promote well-being and psychological adjustment, as high self-esteem is considered synonymous with psychological health (e.g., Taylor & Brown, 1988; 1994).

The parallel being made between self-clarity and self-esteem may well be reflected in individuals' experience as self-clarity and self-esteem are positively and systematically related (Baumgardner, 1990; Campbell et al., 1994). In fact, it has recently been proposed that many of

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the differences observed between low and high self-esteem individuals in social-cognitive functioning may be accounted for by underlying self-clarity differences (Campbell, 1990; Campbell & Lavallee, 1993). The greater defensiveness of high self-esteem individuals may be better understood as reflecting their need to maintain coherence and clarity regarding the self. There is some evidence to support this claim. Although both self-esteem and self-concept clarity are associated with heightened defensiveness as measured by the K-scale of the Minnesota Multiphasic Personality Inventory (MMPI, Dahlstrom, Welsh, & Dahlstrom, 1972; Csank & Conway, 1993), only self-clarity is uniquely related to heightened defensiveness (Csank & Conway, 1993).

The Influence of Self-Reflection on Self-Representation

Self-reflection may have differential influence on the clarity of self-beliefs of individuals high and low in chronic self-concept clarity. Self-reflection, in which individuals introspect and contemplate the basis and meaning of their self-beliefs, may be particularly significant for individuals who are either high or low in self-clarity. Individuals high in self-clarity may have difficulty justifying their strong self-beliefs during self-reflection that focuses on specific characteristics and self-beliefs. In contrast, low clarity individuals may recall and reflect on behavioral instances that imply

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greater definition of self during such self-reflection; self-reflection may in this case increase the clarity of self-beliefs. Thus, self-reflection may lead individuals who are either high or low in Chronic Self-Clarity to become less extreme in self-clarity. This is referred to here as the moderation effect of self-reflection on self-clarity judgments.

Recent research on self-reflection can be interpreted in terms of the present framework. In one experiment, women low in social self-esteem were provided with favourable and unfavourable feedback regarding their personalities (Hixon & Swann, 1993; Experiment 3). The feedback was ostensibly provided by a clinical trainee and was supposedly based upon subjects' responses to personality tests completed at an earlier date. Half of the subjects were asked to think about "what you are like," whereas the remaining subjects were asked to think about "why you are the kind of person you are" while reviewing the feedback. It was found that subjects who were provided more time for self-reflection and who also thought about what kind of person they are endorsed the self-descriptive (negative) feedback more than the self-discrepant (positive) feedback, relative to all other conditions. It was concluded that self-reflection that focuses on what one is like promotes self-insight as it may render self-beliefs more accessible (Hixon & Swann, 1993). Other research by

Hixon and Swann (1993; Experiments 1 and 2) supplied consistent findings regarding the impact of self-reflection on individuals' ability to judge the accuracy of self-relevant feedback. Specifically, greater self-reflection led subjects to rate self-descriptive feedback as more accurate than self-discrepant feedback. Based on their findings, Hixon and Swann concluded that self-reflection promotes a "clearer picture of who and what one is" (p. 42).

According to Hixon and Swann (1993), self-reflection enables individuals to access their well articulated self-concepts and, hence, promotes self-insight. The perspective advanced by Hixon and Swann may, however, be problematic when one considers that their demonstrations of reflection-induced self-understanding were only observed for individuals with unfavourable self-views or low self-esteem. When individuals with favourable self-views were examined (see Hixon & Swann, 1993; Experiment 1) they were not found to differ between reflection and non-reflection conditions. Major concerns regarding their interpretation of their findings can be raised when one considers that individuals who evaluate the self in a negative fashion have also been found to be quite uncertain about their self-worth (e.g., Baumgardner, Kaufman, & Levy, 1989; Pelham & Swann, 1989). Indeed, as mentioned above, self-esteem and self-concept clarity are positively related

(Campbell, 1990; Campbell et al., 1994). That Hixon and Swann selected participants on the basis of self-esteem implies that they may have also, unintentionally, selected participants low and high in self-concept clarity. Specifically, it is likely that the low self-esteem participants in Hixon and Swann's research, who were the only subjects to demonstrate significant effects, were also low in self-clarity. As such, the moderation perspective advanced above can account for their findings. Specifically, the findings of Hixon and Swann are consistent with the view that individuals low in Chronic Self-Concept Clarity will respond to self-reflection with augmented self-insight and clarity as they may be relatively undefended when considering self-relevant information.

<u>Self-Reflection, Mood, and Self-Concept Clarity</u>

In addition to affecting individuals' self-representation, self-reflection may, in turn, have an influence on individuals' transient mood state. Uncertainty regarding the self is thought to be distressing as it may interfere with one's sense of predictability and control (Baumgardner, 1990; Vallacher, 1980). Indeed, research suggests that increasing an individual's self-certainty generates feelings of heightened self-worth or positive self-affect; in one study, Baumgardner (1990) provided subjects feedback that suggested either that they

had certain and well-defined self-knowledge or that they had poorly defined and uncertain self-knowledge. Subjects who received self-certain feedback evidenced increased feelings of positive affect regarding the self relative to those who received uncertain feedback. In regard to the present research, one might argue that self-reflection that increases an individual's self-clarity may lead to more positive affect. Conversely, self-reflection that decreases self-clarity may lead to more negative affect. Thus, according to the moderation perspective advanced in the present thesis, individuals high in Chronic Self-Clarity would demonstrate worsened affect following self-reflection whereas individuals low in Chronic Self-Clarity would evidence improved affect following self-reflection.

The Present Research

The present research addressed the influence of self-reflection on self-concept clarity and affect for individuals low and individuals high in Chronic Self-Clarity. The moderation hypothesis was that self-reflection attenuates the self-clarity of individuals who are high in Chronic Clarity and augments the self-clarity of individuals who are low in Chronic Clarity. In addition, increases and decreases in self-clarity were expected to be accompanied by more positive and more negative affect, respectively.

Study 1

To address the impact of self-reflection on self-clarity and affect in low and high Self-Clarity individuals, participants who were pre-selected on the basis of their self-concept clarity scores were assigned to self-reflection and distraction conditions. Self-reflection was induced by having subjects respond to questions concerning self-generated personality characteristics. The self-reflection manipulation was designed to have subjects reflect about what they are like and why they are the way they are. Thinking about and questioning one's self-beliefs may be considered central to the self-reflection process. Subjects were also asked to write their answers to the questions during the self-reflection period. In the distraction condition, subjects read a magazine and listened to popular background music as an alternative to self-reflection. Measures of self-clarity and of affect were obtained both before (pre) and after (post) the reflection and distraction periods. As self-esteem is highly related to self-concept clarity, a measure of self-esteem was also administered in order to address the potential contribution of self-esteem to the hypothesized effects. Changes in self-clarity and affect were compared across self-reflection and distraction conditions. In addition, subjects completed a post measure of general attitude certainty that addressed the clarity

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and certainty of attitudes regarding a number of general
issues not related to the self. This measure was included
to explore whether self-reflection influences individuals'
certainty regarding beliefs in general. It was expected
that self-reflection would have no influence on the
certainty of beliefs that are not related to the self.

Design

To examine the impact of self-reflection on self-
clarity and affect, a 2 (Self-Reflection: reflection vs.
distraction) X 2 (Chronic Clarity: high vs. low) X 2 (Time:
pre-reflection or pre-distraction vs. post-reflection or
post-distraction) between-within factorial design was
employed. Self-reflection and Chronic Self-Clarity
conditions were the between subject factors. Self-concept
clarity and affect measured at times 1 (pre-reflection or
pre-distraction) and 2 (post-reflection or post-
distraction) were the within subject factors.

Method

Subjects

Subjects were recruited from a booth on the Sir George Williams campus of Concordia University. A sign announced that volunteers were needed to complete questionnaires for a psychology project. Volunteers were offered lottery prizes for their participation. The questionnaires were to be completed immediately at the booth. The materials in the questionnaire packet relevant to the present study were the Self-Concept Clarity Scale (Campbell et al., 1994) and the Rosenberg (1965) Self-Esteem Scale. Questionnaires were presented in counterbalanced order. Other materials included questions on age, sex, language use, and prior research experience. At recruitment, respondents were also invited to complete a form that would enable our research group to contact them concerning participation in studies in our laboratory.

Respondents whose native tongue was not English and who had already participated in research were excluded. Subjects were selected for participation based on their self-concept clarity scores. Subjects were considered low in self-clarity if they scored at or above the 75th percentile (a raw score of 38) of the SCCS distribution.[1] Subjects were considered high in self-clarity if they

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[1] High scores on the SCCS reflect less self-clarity.

scored at or below the 25th percentile (a raw score of 26) of the SCCS distribution. In total, 38 low self-clarity (19 men and 19 women) and 36 high self-clarity (18 men and 18 women) individuals between the ages of 18 and 30 ($M=$ 23.0, $SD=$ 2.3) participated. The mean SCCS score for the low self-clarity group was 45.2 ($SD=$ 4.2). The mean SCCS score for the high self-clarity group was 22.5 ($SD=$ 3.7). Each subject was contacted for participation 3 weeks following recruitment and were scheduled for the earliest possible date. Approximately equal numbers of low and high self-clarity men and women were randomly assigned to reflection and distraction conditions in an alternating fashion over time. One subject was present at each session. Subjects were paid $12.

Materials

Trait Generation and Self-Reflection Induction Task.
For the purpose of the self-reflection manipulation that would follow for subjects in the reflection condition, all subjects wrote traits or characteristics that describe their personality. Specifically, subjects were asked to write words that describe their personality. They were instructed to write as many words as they would like (see Appendix A for instructions for the trait generation task). The sheet of paper provided for subjects' responses had eight lines. The paper was lined in this manner to encourage subjects to write a minimum of three

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characteristics. All subjects did write at least three characteristics ($\underline{M}$= 9.6, $\underline{SD}$= 3.3). The minimum number of characteristics written was 4 and the maximum was 15.

To prepare subjects in the reflection condition for the self-reflection manipulation, subjects first completed a stream of consciousness writing task. The writing task involved having subjects write down all of the thoughts that were going through their mind as they sat alone in the room for approximately 5 min (see Appendix B for instructions for the stream of consciousness writing task). Subjects in the distraction condition also completed this task so as to equate conditions. Following the stream of consciousness writing task, self-reflection was induced in the reflection condition by having subjects answer two questions concerning each of three of their self-generated personality characteristics (see Appendix C for questions used to induce self-reflection). Subjects were asked one why and one what question for each of their three characteristics. The why questions were designed to have subjects reflect about why they have a particular characteristic (e.g., "Why do you think you have this characteristic?", "Why do you see yourself this way?"). The three what questions were designed to have subjects reflect about the importance and meaning a particular characteristic has for them (e.g., "What does it mean to you to have this characteristic?"), and how other

individuals may know that they have a particular characteristic (e.g., "In what ways might people notice this about you?"). The order of the six questions was counterbalanced to create four different orders with the constraint that one _why_ and one _what_ question was asked of each characteristic. Each subject in the reflection condition received one of the orders.

Instructions for the reflection task and the six questions were audio-recorded (see Appendix D). The instructions informed subjects that they would be asked two questions concerning each of their three characteristics. They were instructed to write their answer to each question. Subjects were instructed to begin writing after they had heard the end of a question and to continue writing until they were asked to stop. Subjects were provided either 2 or 3 min to respond to each question. Response time varied across questions to prevent subjects from anticipating duration. Response time was also counterbalanced within each of the four question orders in that each of the four orders reflected a different ordering of response time.

Measures

Self-Esteem. Self-esteem was assessed at time of recruitment using the Rosenberg Self-Esteem Scale (SES). The SES is a 10-item self-report measure that has demonstrated reliability and validity as a measure of the

positivity of feelings about the self (Rosenberg, 1965) (see Appendix E). Higher scores reflect greater self-esteem.

Self-Clarity. The Self-Concept Clarity Scale (SCCS) was used to assess the extent to which self-beliefs are clearly and confidently defined. The SCCS is a 12-item self-report measure of the temporal stability, consistency, and clarity of self-beliefs (see Appendix F). The SCCS has demonstrated reliability and validity (Campbell et al., 1994). The scale was constructed so that higher scores reflect reduced self-clarity. The SCCS was administered to all participants at time of recruitment: this constituted the pre measure. The SCCS post measure was administered at the time of the study following the self-reflection manipulation in the reflection condition and after the distraction period in the distraction condition.

During the study, subjects also completed a self-description measure for which response latency provided an additional measure of self-clarity (cf. Campbell, 1990). Longer response latencies are taken to reflect less certainty of self-beliefs (Campbell, 1990). The measure was programmed and administered on a Packard Bell PC computer (Model PB 8810). Subjects were first provided instructions on the computer screen (see Appendix G). The measure involved subjects judging whether various personality characteristics apply to them. The personality

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characteristics were presented on the computer screen and
subjects indicated their responses using the keyboard.
Subjects first completed 11 practice trials. Subjects were
not informed that the first 11 trials were for practice
purposes only. Items included on the practice trials were
11 of the gender-neutral trait adjectives from the Bem Sex-
Role Inventory (Bem, 1981). Following the practice,
subjects completed the timed self-description task. The
items consisted of 33 personality characteristics that
undergraduate students typically use to describe
themselves. The items were generated in a pretest by
asking a random sample of 25 undergraduate students, both
men and women, to supply a list of words that describe
their personality. The 33 characteristics with the highest
frequency were included on the self-description latency
questionnaire (see Appendix H for items included on the
practice trials and on the self-description latency
questionnaire). Subjects indicated whether each
characteristic is self-descriptive by answering either yes
or no. The "yes" key was the relabelled "/" key: the "no"
key was the relabelled z key. Subjects were not informed
that their responses would be timed and were instructed to
simply provide the first answer that comes to mind.
Following each response, the next item on the scale was
immediately displayed. Response latency was the measure of
interest and response time for each item was measured in

milliseconds. The self-description latency measure was administered to all participants once, after the self-reflection manipulation in the reflection condition and after the distraction period in the distraction condition.

Affect. Subjects were asked to rate their current affect in terms of 17 positive and 18 negative affect adjectives (see Appendix I). The adjectives sample the range of emotions identified by Watson and Tellegen (1985) (i.e., high versus low negative affect; high versus low positive affect; pleasantness versus unpleasantness; and engagement versus disengagement). This affect measure has been used in previous research on acute affective states (e.g., Howell & Conway, 1992). For the purpose of the present research, the affect measure was programmed and administered on an AST Premium Exec lap-top computer (386SX/20, Model 43V). Subjects were first provided with instructions on the computer screen (see Appendix J for instructions for the affect measure) and completed 8 practice trials. For the practice trials, subjects rated the current weather conditions in terms of 9 descriptive adjectives (e.g., cold, foggy, sunny) using 9-point scales as described below (see Appendix K for items included on the practice trials). For affect, one affect adjective was presented at a time on the computer screen accompanied by a 9-point scale [with endpoints labelled not at all (1) and extremely (9)] and subjects responded by using the numeric

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keypad of the computer keyboard. Following each response, the next item on the scale was immediately displayed. The affect measure was administered to participants in the reflection condition both before and after the self-reflection manipulation and to participants in the distraction condition both before and after the distraction period.

Attitude-Certainty. A questionnaire concerning the clarity and stability of attitudes unrelated to the self was constructed for the purpose of the present research. The questionnaire was designed to parallel the SCCS in terms of item wording and response format. The 12 items on the attitude-certainty questionnaire assess the clarity and stability of attitudes on topics such as abortion, capital punishment, and music (e.g., "I am very certain about my taste in music"; see Appendix L). Subjects indicated their responses on a 5-point scale with endpoints labelled strongly disagree (1) and strongly agree (5). To correspond to the SCCS, the attitude-certainty measure was constructed so that high scores reflect less certainty. The attitude-certainty questionnaire was administered to participants in the reflection condition following the self-reflection manipulation and to participants in the distraction condition following the distraction period.

Valence of Personality Characteristics. All subjects rated the valence of their three self-generated personality

characteristics. Subjects rated the valence of each characteristic on 9-point scales with endpoints labelled very negative (-4) and very positive (+4) (see Appendix M). Subjects completed this measure immediately prior to debriefing.

Procedure

The true purpose of the study was disguised to avoid demand characteristics. Subjects were telephoned by the experimenter and asked if they would like to participate in two studies being conducted by the research group. The experimenter was and remained blind to subjects' self-clarity status. When subjects arrived, they were greeted by the experimenter and were provided a written introduction to the supposed first study. The experimenter read the introduction aloud. Subjects were led to believe that the first study concerned age differences in how individuals describe their thoughts and feelings, as well as addressing differences between descriptions provided in writing and provided in interview. All subjects were told that they had been assigned to the written-description condition and that they would be completing various description tasks (see Appendix N for introduction supplied to subjects). In fact, subjects were randomly assigned to reflection and distraction conditions. The procedure in both conditions was identical in all respects except for the 20 min period of self-reflection in the reflection

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condition being substituted by a distraction period of the same duration in the distraction condition.

After reading the introduction, the experimenter provided instructions regarding the use of the computer and the response format of the affect adjective rating scale. Subjects were instructed to respond according to how they felt at the moment. Subjects were left alone and were provided sufficient time to complete the affect measure. On average, subjects completed the measure in 15 min.

All subjects were then asked to write words that describe their personality. They were instructed to write as many words as they would like in the order that they come to mind, to not be concerned with spelling, and that this self-description task was 5 min in duration. For subjects in the reflection condition this task provided the characteristics that formed the basis of the reflection manipulation. Subjects in the distraction condition completed this task so as to equate conditions.

All subjects then completed a stream of consciousness writing task. The experimenter read aloud the instructions for the task. Subjects were instructed to write all of the thoughts that were going through their mind as they sat alone in the room for approximately 5 min. They were asked to write continuously during the 5 min period. The procedure for this task was derived from the work of Ericsson and Simon (1984). The purpose of this written

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thought reporting task was to prepare subjects assigned to the reflection condition for the self-reflection manipulation. Subjects in the distraction condition completed this task to equate conditions.

Following the stream of consciousness writing task, all subjects were provided with their previously generated list of personality characteristics. They were asked to transcribe the three consecutive characteristics from the middle of the list onto a separate sheet of paper. Subjects were led to believe that this transcription task paralleled that being used in the supposed interview condition. In fact, these three characteristics were to be subsequently used by subjects in the reflection condition for the purpose of the self-reflection manipulation. Subjects in the distraction condition completed this task so as to equate conditions.

The procedure then differed across experimental conditions. In the self-reflection condition subjects were provided with their list of three selected personality characteristics. They were informed that they would be asked some questions concerning their characteristics. Subjects listened to the audio-recorded instructions and questions for self-reflection. Subjects wrote their answers to each of the questions. They were left alone to complete this 20 min self-reflection task.

In contrast, subjects in the distraction condition

were led to believe that the procedure required a 20 min pause. They were asked to remain in the room during the pause. Subjects were supplied a popular science magazine (Discover: The world of science; May 1994, Vol. 15, Number 5). As well, a tape-recording of popular music by The Beatles was played (see Appendix O for a list of songs). The reading material and background music served as distracters that reduced the likelihood of self-reflection in the distraction condition.

The remainder of the procedure was the same in both conditions. The computerized affect adjective rating scale was readministered to all subjects. To reduce possible concerns with consistency, subjects were led to believe that their initial responses on the computer had been lost due to computer error (cf. Linville, 1985). Consequently, they were being asked to again complete the measure. All subjects agreed to this request. Subjects were instructed to respond according to how they were presently feeling as the measure was designed to assess momentary feelings.

All subjects were then led to another room to participate in the supposed second study. This deception avoided sensitizing subjects to the relation between the earlier tasks and the post measure of self-clarity. The time delay between the administration of the SCCS pre measure at recruitment and the SCCS post measure at the time of the study ranged from 3 to 5 weeks. Subjects were

led to believe that the second study was being conducted by another member of the research group who was unexpectedly unavailable. Subjects were provided with a written introduction to the study (see Appendix P). The introduction stated that the study concerned a general survey of undergraduate students' attitudes. They were led to believe that the study was being conducted to develop research measures. Subjects were also led to believe that participants were being randomly assigned to complete different sets of questionnaires. From a number of questionnaire packets on a table, the experimenter provided subjects with a packet that included 3 questionnaires presented in the following order: a sentence completion questionnaire used as filler, the SCCS, and the Attitude-Certainty questionnaire. Subjects were instructed that once they had completed the questionnaire packet, they should then complete a questionnaire on the computer. The questionnaire on the computer provided the latency measure of self-clarity. Subjects were left alone to complete the measures. A tone sounding from the computer indicated to the experimenter that the subject had completed the self-description measure on the computer. At this point the experimenter entered the room.

The experimenter and subject then returned to the first room. All subjects were supplied their list of three selected personality characteristics and the valence of

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personality characteristics measure was administered.
Subjects were then debriefed, remunerated, and thanked for
their participation. Although subjects were informed that
the study concerned the relation between self-reflection,
affect, and self-description, they were not informed that
they had been selected for participation on the basis of
their SCCS scores. During the debriefing period, the
experimenter also explained how the procedures for the
study were developed and subjects were encouraged to raise
questions or concerns they may have had regarding any
aspect of the study. Although the study involved
considerable deception, subjects responded positively to
the study as evidenced during the debriefing period.
Indeed, research indicates that subjects who are
appropriately debriefed respond favourably to having
participated in research that required deception
(Christensen, 1988). All subjects indicated an interest in
receiving the results of the study and provided their name
and address on an envelope for a subsequent mailing of the
study results.

Results

All data were first examined for univariate outliers within each group of the 2 (Chronic Clarity: high vs. low) X 2 (Reflection Condition: self-reflection vs. distraction) X 2 (Gender: men vs. women) between-subject factorial design. No outliers were found. Tests for normality and homogeneity of variance were also conducted for each analysis of variance (ANOVA) reported below. The assumptions of normality and homogeneity of variance were met for all analyses except one. The one exception to this was for analyses involving negative affect. Negative affect was found to be positively skewed and demonstrated significant heterogeneity of variance across groups; analyses were thus conducted on a square root transformation of negative affect scores. As well, all factorial ANOVAs and the one multivariate analysis of variance (MANOVA) were conducted using unweighted means due to unequal cell sizes (Tabachnick & Fidell, 1989). Finally, degrees of freedom for analyses involving self-description latency and attitude certainty are reduced by 1 due to missing data.

The major hypothesis was that self-reflection decreases the clarity of individuals high in Chronic Clarity and increases the clarity of individuals low in Chronic Clarity. Thus, the principal analysis of interest was a 2 (Chronic Clarity: high vs. low) X 2 (Reflection

Condition: self-reflection vs. distraction) X 2 (Gender:
men vs. women) X 2 (Time: before reflection or distraction
vs. after) between-within ANOVA on self-concept clarity
scores. A Chronic Clarity X Reflection Condition X Time
interaction was the hypothesized effect. The analysis did
not reveal the expected interaction ($F < 1$). See Appendix Q
for source tables (A to F) of all analyses conducted for
the original sample.

Attempts were then made to address why the expected
results were not obtained. One possibility was that the
low and high Chronic Clarity groups differed on self-
esteem. Analyses did reveal a significant difference in
self-esteem between low and high Chronic Self-Clarity
subjects ($F(1, 66) = 45.5$, $p < .0001$). The mean self-esteem
score for low Clarity subjects was 26.2 ($SD = 4.8$). The
corresponding mean for high Clarity subjects was 34.0 ($SD = 4.5$). As such, the low and high Chronic Clarity groups
were low and high in self-esteem, respectively. In an
attempt to reduce the impact of the confound between
Chronic Self-Clarity and self-esteem, the data of subjects
with extreme self-esteem scores were excluded. The mean
self-esteem score for the overall sample was 30.0 ($SD = 6.0$) and data were excluded for subjects with self-esteem
scores that differed from the mean by 1.25 standard

deviations or more.[2] This resulted in the exclusion of 4

high Clarity subjects from the reflection condition (3

women and 1 man), 4 high Clarity subjects from the

distraction condition (1 woman and 3 men), 3 low Clarity

subjects from the reflection condition (1 woman and 2 men),

and 3 low Clarity subjects from the distraction condition

(1 woman and 2 men). The overall sample size was thus

reduced to 60 (32 women and 28 men). The data for this

sample was the basis of all subsequent analyses. The

exclusion of data for subjects with extreme self-esteem

scores did not equate the Clarity groups on self-esteem.

The remaining self-esteem differences are described below.

Self-Esteem

Analyses were conducted to examine differences in

self-esteem between Chronic Clarity groups. A 2 (Chronic

Clarity) X 2 (Reflection Condition) X 2 (Gender) between

subjects ANOVA on self-esteem scores revealed that low

Clarity subjects evidenced significantly lower self-

esteem (M = 27.9, $\underline{SD}$ = 3.1) than high Clarity subjects ($\underline{M}$ =

32.5, $\underline{SD}$ = 3.9; $\underline{F}(1, 59)$ = 22.7, $\underline{p}$< .001). There were no

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[2] Analyses corresponding to those reported in the
Results section were also conducted on the basis of self-
esteem cut-offs of .75, 1.0, and 1.5 standard deviations.
The same pattern of results as reported in the Results
section was generally obtained employing each of these cut-
off points. The 1.25 standard deviation cut-off point was
selected as it represents the greatest elimination of
subjects with extreme self-esteem scores while maintaining
sufficient sample size.

other significant self-esteem differences ($\underline{F}$s< 1).

Self-Clarity

Self-Concept Clarity. It was hypothesized that reflection will decrease the clarity of individuals high in Chronic Self-Clarity and will increase the clarity of individuals low in Chronic Self-Clarity. Such a moderation effect was not expected to occur in the distraction condition. A 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) X 2 (Time: before reflection or distraction vs. after) between-within ANOVA was conducted on self-concept clarity scores. The hypothesized effect was a 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Time) interaction. The analysis revealed a significant Chronic Clarity X Time interaction ($\underline{F}$(1, 52) = 6.2, $\underline{p}$< .05). This interaction reflects the fact that, across reflection condition and gender, low Clarity individuals demonstrated a significant increase in self-clarity (pre reflection and distraction: $\underline{M}$ = 44.9, $\underline{SD}$ = 4.4 vs. post reflection and distraction: $\underline{M}$ = 42.4, $\underline{SD}$ = 5.8; $\underline{t}$(31) = 2.9, $\underline{p}$< .01); on average, high Clarity individuals did not evidence decreased clarity ($\underline{t}$< 1). This interaction was qualified by a significant Chronic Clarity X Reflection Condition X Gender X Time interaction ($\underline{F}$(1, 52) = 4.3, $\underline{p}$< .05). The latter 4-way interaction reflects the fact that women demonstrated the hypothesized Clarity X Reflection X Time interaction ($\underline{F}$(1, 28) = 4.4, $\underline{p}$< .05) whereas men did

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not (F < 1). Figure 1 presents self-clarity change scores across time for low and high Clarity men and women in the reflection and distraction conditions; as mentioned in Footnote 1, high scores on the SCCS reflect less self-clarity: thus, self-clarity change was calculated by subtracting post reflection or distraction SCCS scores from pre reflection or distraction SCCS scores so that positive change scores indicate increased clarity and negative change scores indicate decreased clarity (see Figure 1). No other significant interactions emerged for the ANOVA. The only other significant effect that emerged was a main effect for Chronic Clarity that confirmed the subject selection procedure employed in the present study. Across reflection condition, gender, and time, low Chronic Clarity subjects evidenced less self-clarity than high Chronic Clarity subjects (F(1, 52) = 320, p< .0001). See Table 1 for mean self-clarity scores for all groups.

The significant interaction between Clarity, reflection condition, and time for women was examined for simple interaction effects. Based on the hypothesis, an interaction between Chronic Clarity and time was expected in the reflection condition but not in the distraction condition. As expected, the Chronic Clarity X Time interaction for women occurred in the reflection condition (F(1, 13) = 8.0, p< .02) and not in the distraction condition (F< 1). Post-hoc analyses revealed that high

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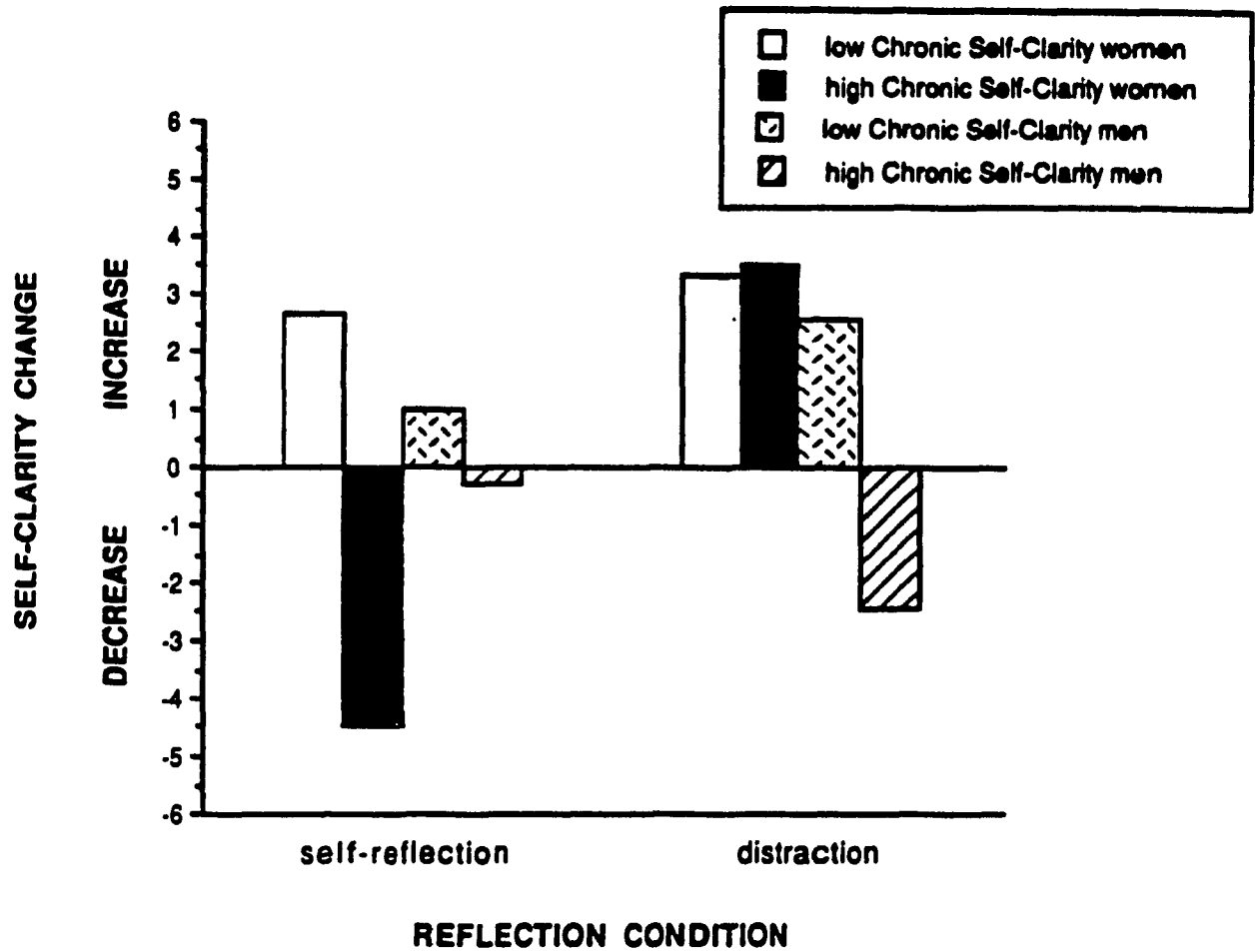
Figure 1

<u>The Influence of Self-Reflection on Self-Concept Clarity</u>

<u>Change in Low and High Chronic Clarity Men and Women (Study</u>

<u>1)</u>

Table 1

Mean Self-Clarity Scores for Low and High Chronic Clarity Men and Women in the Reflection and Distraction Conditions (Study 1)

Reflection Condition

	Men		Women	
	Low Clarity (n = 7)	High Clarity (n = 7)	Low Clarity (n = 9)	High Clarity (n = 6)
Pre-Reflection				
M	44.0	23.0	45.6	20.3
SD	3.7	2.1	4.6	2.3
Post-Reflection				
M	43.0	23.2	42.8	24.8
SD	4.1	5.3	6.5	4.8
Pre-Post Clarity Difference	(1.0)	(-0.2)	(2.8)	(-4.5)

Distraction Condition

	Men		Women	
	Low Clarity (n = 7)	High Clarity (n = 7)	Low Clarity (n = 9)	High Clarity (n = 8)
Pre-Distraction				
M	43.7	24.0	45.9	23.8
SD	3.2	2.1	5.4	4.1
Post-Distraction				
M	41.1	26.4	42.5	20.4
SD	6.1	6.9	6.0	6.4
Pre-Post Clarity Difference	(2.6)	(-2.4)	(3.4)	(3.4)

Chronic Clarity women evidenced less clarity after reflection (M = 24.8, SD = 4.8) than before (M = 20.3, SD = 2.3; $t(5)$ = 2.1, $p<$ .08).[3] Low Chronic Clarity women tended to evidence more clarity following reflection; however, this effect was not significant ($t(8)$ = -1.8, $p>$ .1). These results provide partial support for the hypotheses that reflection will decrease the clarity of high Chronic Clarity individuals and increase the clarity of low Chronic Clarity individuals. As mentioned above, there was no interaction between Chronic Clarity and time in the distraction condition. In the distraction condition, however, both high and low Chronic Clarity women evidenced an overall increase in clarity (before the distraction period: M = 35.5, SD = 12.3; after the distraction period M = 32.1, SD = 13.0, $F(1, 15)$ = 8.0, p <.02).

To allow for post-hoc comparisons between groups, self-clarity difference scores were calculated so that positive difference scores indicate increased clarity whereas negative difference scores indicate decreased clarity. Tukey post-hoc analyses on clarity difference scores revealed a significant difference between high Chronic Clarity women in the reflection condition (M = -4.5) and high Chronic Clarity women in the distraction

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[3] All statistical tests in the Results section are two-tailed.

condition ($\underline{M}$ = 3.5; $\underline{F}$(1, 13) = 7.2, $\underline{p}$< .02; See Figure 1).

In addition, in the reflection condition, high Clarity

women, relative to low Clarity women, evidenced a

significantly greater decrease in clarity ($\underline{F}$(1, 14) = 7.9,

$\underline{p}$< .02). There was no significant difference in clarity

change for low Clarity women across the reflection and

distraction conditions.

Self-Reflection Transcripts

The reflection manipulation used in the present study

differentially influenced the clarity of high and low

Chronic Clarity women. It is possible, however, that high

and low Clarity individuals engaged in differing amounts of

self-reflection during the self-reflection manipulation.

As the number of words written provides an index of the

extent to which subjects engaged in self-reflection,

responses to the self-reflection questions were transcribed

and scored accordingly. A 2 (Chronic Clarity) X 2 (Gender)

ANOVA on total number of words written by subjects in the

reflection condition revealed no significant effects ($\underline{F}$s<

1). High and low Clarity subjects did not differ in the

number of words written during self-reflection. On

average, subjects wrote a total of 358 ($\underline{SD}$ = 99) words in

response to the self-reflection questions (high Clarity: $\underline{M}$

= 336, $\underline{SD}$ = 108; low Clarity: $\underline{M}$ = 376, $\underline{SD}$ = 90).

Self-Description Response Latency. Self-description

response latency served as a secondary measure of self-

clarity. Longer response latencies are taken to reflect less clarity. It was expected that high Clarity subjects will evidence longer self-description response latencies following self-reflection, relative to high Clarity subjects in the distraction condition. In contrast, low Clarity subjects were expected to evidence shorter response latencies following self-reflection, relative to low Clarity subjects in the distraction condition.

A 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) between subjects ANOVA on mean latency scores was conducted. Based on the results for self-concept clarity described above, it was expected that the Chronic Clarity X Reflection Condition interaction would be significant for women. The analyses revealed a significant main effect for gender ($F(1, 52)= 5.3$, $p< .03$) and a significant Chronic Clarity X Reflection Condition X Gender interaction ($F(1, 52) = 5.2$, $p< .03$). Across reflection condition and Chronic Clarity, women evidenced shorter response latencies ($M = 1604$, $SD = 431$) than men ($M = 1955$, $SD = 695$). The 3-way interaction was further examined for simple interaction effects. The expected Chronic Clarity X Reflection Condition interaction did not achieve significance for women ($F(1, 28) = 2.8$, $p> .1$) or men ($F(1, 24) = 3.4$, $p> .05$). The pattern of means for women is, however, consistent with the hypothesis. In contrast, the pattern of means for men is opposite to that obtained for

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women (see Table 2 for mean self-description latency scores for each group).

Trait Valence Ratings

Analyses were conducted to examine potential group differences in subjects' valence ratings of their three selected personality traits. The 2 (Chronic Clarity: high vs. low) X 2 (Reflection Condition: self-reflection vs. distraction) X 2 (Gender: men vs. women) ANOVA on trait valence ratings revealed a significant main effect for Chronic Clarity ($F(1, 52) = 4.2$, $p< .05$) and no other significant effects ($Fs< 1$). Across reflection condition and gender, high Clarity subjects rated their self-descriptive traits as more positive ($M = 6.8$, $SD = 4.5$) than low Clarity subjects ($M = 3.8$, $SD = 5.6$).

Affect

Affect was assessed immediately before (pre) and after (post) the self-reflection period for subjects in the reflection condition and at corresponding times for subjects in the distraction condition. Two separate cluster analyses were first conducted on the pre and post affect items, respectively. The two analyses revealed virtually identical results. Two major clusters emerged. Cluster scores were derived by averaging responses to items on the respective clusters. All items on each cluster were highly correlated ($rs > .30$, $ps < .05$). Higher scores on each cluster reflect more extreme affect. The positive affect

Table 2

Mean Self-Description Latency Scores (MS) for Low and High Chronic Clarity Men
and Women in the Reflection and Distraction Conditions (Study 1)

	Men		Women	
	Low Clarity	High Clarity	Low Clarity	High Clarity
Reflection				
M	2258	1675	1612	1850
SD	900	510	312	595
n	7	7	9	6
Distraction				
M	1754	2133	1642	1369
SD	402	812	473	294
n	7	7	9	8

cluster consisted of the items content, good, happy, pleased, satisfied, and strong. The negative affect cluster consisted of the items discouraged, lonely, miserable, sad, sorry, and unhappy. The positive affect cluster for the pre period and the positive affect cluster for the post period were highly correlated (r =.89, p< .01) as were the negative affect clusters for the pre and post periods (r = .83, p< .01). In addition, the positive and negative affect clusters were found to be highly correlated at both pre (r = -.70, p< .01) and post (r = -.60, p<.01) administrations.

It was hypothesized that self-reflection worsens affect in high Clarity individuals and improves affect in low Clarity individuals. Changes in affect were not expected for subjects in the distraction condition. As the two affect clusters were correlated, positive and negative affect were analyzed in a 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) X 2 (Time: pre vs. post) between-within MANOVA. Prior to analyses, negative affect cluster scores were subjected to a square root transformation to adjust for positive skew. The MANOVA revealed no main effect for time and no significant interactions involving time (Fs< 1). That is, there were no significant changes in affect for any of the conditions. Thus, the hypothesis for affect was not supported.

The analysis did reveal a significant main effect for

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Chronic Clarity group ($F(1, 52) = 6.5$, $p< .01$). Low Clarity subjects evidenced greater negative affect at both pre and post periods ($M = 2.7$, $SD = 1.5$ and $M = 2.6$, $SD = 1.4$, respectively) than high Clarity subjects ($M = 1.5$, $SD = .63$ and $M = 1.7$, $SD = 1.0$, respectively; $Fs(1, 52) > 7$, $ps< .01$). In addition, low Clarity subjects demonstrated less positive affect at the pre period ($M = 4.6$, $SD = 2.3$) than high Clarity subjects ($M = 5.9$, $SD = 1.8$; $F(1, 52) = 4.3$, $p< .05$). There was no significant difference between low and high Clarity subjects for positive affect assessed at the post period.

The MANOVA also revealed a significant Clarity X Reflection Condition X Gender interaction ($F(1, 52) = 4.2$, $p< .03$). Simple effects analyses revealed that a Clarity X Reflection Condition interaction occurred for men ($F(1, 24) = 4.2$, $p< .03$) and not for women ($F< 1$). Further analyses indicated that the Clarity X Reflection interaction for men occurred only for negative affect assessed at the pre period. Specifically, low Clarity men in the reflection condition evidenced higher negative affect at the pre administration ($M = 1.8$, $SD = .37$) than low Clarity men in the distraction condition ($M = 1.3$, $SD = .25$; $F(1, 24) = 4.2$, $p< .06$).

Attitude Certainty

It was expected that certainty of attitudes unrelated to the self will not be influenced by reflection. That is,

it was expected that attitude certainty will not differ between the reflection and distraction conditions for low or for high Clarity individuals. Contrary to expectation, the 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) between-subject ANOVA on attitude certainty revealed a significant main effect for reflection condition ($\underline{F}$(1, 51) = 5.6, $\underline{p}$< .03) and a marginally significant main effect for Clarity condition ($\underline{F}$(1, 51) = 4.0, $\underline{p}$< .06). Subjects in the reflection condition evidenced less certainty ($\underline{M}$ = 29.2, $\underline{SD}$ = 5.4) than those in the distraction condition ($\underline{M}$ = 25.3, $\underline{SD}$ = 6.5). In addition, across reflection condition and gender, low Clarity subjects evidenced less certainty ($\underline{M}$ = 28.8, $\underline{SD}$ = 6.4) than high Clarity subjects ($\underline{M}$ = 25.5, $\underline{SD}$ = 5.7). See Table 3 for mean attitude certainty scores for each group.

Further analyses were conducted to explore the magnitude of discrepancy between subjects' attitude certainty and their self-concept clarity. Attitude-self discrepancy scores were computed by subtracting subjects' self-concept clarity scores obtained at the time of the study from their attitude certainty scores. Thus, positive discrepancy scores indicate that self-certainty is greater than attitude certainty. Negative discrepancy scores indicate that self-certainty is less than attitude certainty. A 2 (Chronic Self-Clarity) X 2 (Reflection Condition) X 2 (Gender) between-subject ANOVA on attitude-

Table 3

Mean Attitude Certainty Scores for Low and High Chronic Clarity Individuals in the Reflection and Distraction Conditions (Study 1)

	Low Clarity	High Clarity
Reflection		
M	30.8	27.30
SD	4.9	5.5
n	16	13
Distraction		
M	26.6	23.9
SD	7.1	5.6
n	16	15

self discrepancy scores revealed a significant main effect for Chronic Clarity condition ($F(1, 51) = 65$, $p < .001$). Low Clarity subjects evidenced a greater negative discrepancy between attitude certainty and self-clarity ($M = -13.6$, $SD = 7.84$) than high Clarity subjects ($M = 1.9$, $SD = 7.0$). Thus, relative to high Clarity subjects, low Clarity subjects demonstrated less certainty over self-beliefs than certainty of attitudes unrelated to the self. High Clarity subjects showed a tendency to rate self-beliefs as slightly more certain and clear than attitudes unrelated to the self. No other significant effects emerged.

Discussion

The results of Study 1 reveal that following self-reflection, women high in Chronic Clarity experienced decreased clarity whereas women low in Chronic Clarity tended to evidence increased clarity. A consistent, albeit weaker, pattern of results emerged for high and low Clarity women when clarity was assessed in terms of self-description response latency. Thus the moderation hypothesis that reflection will attenuate the self-clarity of high Clarity individuals and will augment the self-clarity of low Clarity individuals received partial support. Specifically, the hypothesis was supported for women but not for men. The self-reflection manipulation did not influence the degree of clarity of low and high Chronic Clarity men.

Women were more readily influenced by self-reflection than men in the present study. Previous research has found that women, relative to men, tend to be more responsive to situations that focus attention on the self (Ingram, Cruet, Johnson, & Wisnicki, 1988). In particular, women tend to respond with greater self-attention than men given the same self-focus manipulation. As Ingram et al. (1988) have argued, women may have a greater readiness to engage in self-directed attention. If women do have a greater propensity to engage in self-reflection than men, it is possible that the reflection manipulation employed in the

present study may have been more impactful for women and more relevant for their sense of self. Whether women do engage in self-reflection to a greater degree than men in their daily lives has, however, yet to be examined.

Self-reflection did not appear to influence the acute mood of high and low Clarity individuals. There was no change in affect in any of the conditions. Thus the hypothesis that reflection will worsen affect in high Clarity individuals and will improve affect in low Clarity individuals was not supported. It appears that the changes in self-clarity observed with reflection, decreased self-clarity of high Clarity women and increased self-clarity of low Clarity women, occurred independent of affective change.

Self-reflection appears to have a general influence on the certainty and clarity of beliefs. Specifically, self-reflection was found to decrease both high and low Clarity individuals' certainty regarding beliefs and attitudes not directly related to the self. This result was unexpected and is counter to the notion that self-reflection will have a specific influence on the clarity of beliefs related solely to the self. One may argue, however, that most attitudes and beliefs, if not explicitly self-related, are relevant to individuals' present construal of self and self-knowledge.

The results of the present study lend preliminary

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support to the hypothesized effect of self-reflection on individuals' clarity of self-beliefs. The obtained gender differences in the impact of reflection were, however, unexpected. In addition, the significant results of the present study were based on the exclusion of data for subjects with extreme levels of self-esteem scores. Given these unanticipated conditions, a second study was conducted to replicate the findings.

Study 2

The results of Study 1 suggest that self-reflection decreases the self-clarity of women high in Chronic Clarity and tends to increase the clarity of women low in Chronic Clarity. These findings are consistent with the position that reflection will reduce the extremity of clarity in high and low Clarity individuals. Yet, no significant effects were observed for men. The obtained gender differences in Study 1 were unexpected. As well, large self-esteem differences between high and low Clarity individuals were found to obscure the impact of reflection on clarity.

A second study was conducted to replicate the findings for self-clarity obtained in Study 1. In Study 2, high and low Chronic Clarity groups were equated on self-esteem. This allows for a stringent examination of the influence of reflection on clarity in high and low Chronic Clarity individuals. A moderation effect of self-reflection was expected for women in that self-reflection will attenuate self-clarity for high Clarity women and augment self-clarity for low Clarity women. Such a moderation effect was not expected to occur in the distraction condition for women, or in either condition for men. The procedure and materials of Study 2 were identical to those employed in Study 1.

Method

Subjects

Subjects were recruited for participation as in Study 1. Low and high Chronic Clarity subjects were identified as in Study 1. Low and high Chronic Clarity subjects were also matched on self-esteem by selecting subjects who scored above the 25th percentile of the self-esteem distribution (a score above 28) or below the 75th percentile (a score below 34). Forty low Chronic Clarity (20 men and 20 women) and 43 high Chronic Clarity (20 men and 23 women) individuals between the ages of 18 and 30 (M = 22.0, SD = 2.5) participated. The low Chronic Clarity group had a mean SCCS score of 42.2 (SD= 3.5) and a mean SEI score of 29.8 (SD= 2.1). The corresponding means for the high Chronic Clarity group were 24.6 (SD= 3.1) and 30.6 (SD= 3.2), respectively. Subject assignment to condition, scheduling, and payment were as in Study 1.

Procedure

All materials, measures, and procedures are identical to those in Study 1; however, during the distraction period subjects in Study 2 read the current issue of the same magazine adopted in Study 1 (Discover: The world of science; October 1994, Vol.15, Number 10).

Results

All data were first examined for univariate outliers as in Study 1. No outliers were found. Tests for normality and homogeneity of variance were also conducted for each ANOVA reported below. The assumptions for normality and homogeneity of variance were met for all analyses expect one. The one exception to this was for analyses involving negative affect. Negative affect was found to be positively skewed and negative affect measured after the reflection manipulation for subjects in the self-reflection condition and after the distraction period for subjects in the distraction condition demonstrated significant heterogeneity of variance across groups. Analyses for affect were thus conducted on a square root transformation of negative affect scores. As in Study 1, all factorial ANOVAs and the one MANOVA were conducted using unweighted means due to unequal cell sizes (Tabachnick & Fidell, 1989).

Self-Esteem

Analyses were first conducted to confirm that the high and low Clarity groups were equated on self-esteem and to examine for differences in self-esteem that may have occurred between the reflection and distraction conditions or between men and women. A 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) ANOVA on self-esteem scores revealed no main effect for Chronic Clarity group or

any other significant main effects or interactions. Thus, high and low clarity groups were similar on self-esteem.

Self-Clarity

Self-Concept Clarity. It was expected that the results for self-concept clarity will replicate those obtained in Study 1. Thus, self-reflection was expected to decrease the self-clarity of women high in Chronic Clarity and to increase the self-clarity of women low in Chronic Clarity. Such a moderation effect was not expected to occur for women in the distraction condition, or for men in either condition. As in Study 1, a 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) X 2 (Time) between-within ANOVA was conducted on self-concept clarity scores. The Chronic Clarity X Reflection Condition X Gender X Time interaction was the hypothesized effect. The analysis revealed a significant Chronic Clarity X Time interaction ($\underline{F}$(1, 75) = 8.0, $\underline{p}$ < .01) indicating that, across reflection condition and gender, high Clarity subjects evidenced decreased clarity (pre: $\underline{M}$ = 24.6, $\underline{SD}$ = 3.1 vs. post: $\underline{M}$ = 26.5, $\underline{SD}$ = 6.4; $\underline{t}$(42) = -2.0, $\underline{p}$< .06) and low Clarity subjects evidenced increased clarity (pre: $\underline{M}$ = 42.1, $\underline{SD}$ = 3.5 vs. post: $\underline{M}$ = 39.5, $\underline{SD}$ = 8.1; $\underline{t}$(39) = 2.1, $\underline{p}$< .05). This 2-way interaction was, however, qualified by the expected Chronic Clarity X Reflection X Gender X Time interaction ($\underline{F}$(1, 75) = 5.2, $\underline{p}$< .03). As obtained in Study 1, the 4-way interaction reflects the fact that women

demonstrated the hypothesized Clarity X Reflection X Time
interaction ($\underline{F}$(1, 39) = 5.6, $\underline{p}$< .03) whereas men did not ($\underline{F}$
< 1). See Figure 2 for self-clarity change scores across
time for low and high Chronic Clarity men and women in the
reflection and distraction conditions. No other
significant interactions emerged ($\underline{F}$s< 1). The only other
significant effect that emerged was a main effect for
Chronic Clarity that confirmed the subject selection
procedure employed. Across reflection condition, gender,
and time, low Clarity subjects evidenced less self-clarity
than high Clarity subjects ($\underline{F}$(1, 75) = 252.0, $\underline{p}$< .0001).
See Table 4 for mean self-clarity scores for each group.

The significant interaction between Clarity,
reflection condition, and time for women was examined for
simple interaction effects. Based on the hypothesis, an
interaction between Chronic Clarity and time was expected
in the reflection condition but not in the distraction
condition. As expected, the significant Chronic Clarity X
Time interaction for women occurred in the reflection
condition ($\underline{F}$(1, 20) = 10.8, $\underline{p}$< .01) and not the distraction
condition ($\underline{F}$< 1). Post-hoc analyses revealed that high
Clarity women evidenced less clarity after reflection ($\underline{M}$ =
30.3, $\underline{SD}$ = 7.7) than before ($\underline{M}$ = 25.0, $\underline{SD}$ = 3.0; $\underline{t}$(11) =
2.3, $\underline{p}$< .05). In addition, low Clarity women evidenced
greater self-clarity after reflection ($\underline{M}$ = 39.0, $\underline{SD}$ = 7.7)
than before ($\underline{M}$ = 44.2, $\underline{SD}$ = 3.3; $\underline{t}$(9) = -2.5, $\underline{p}$< .04).
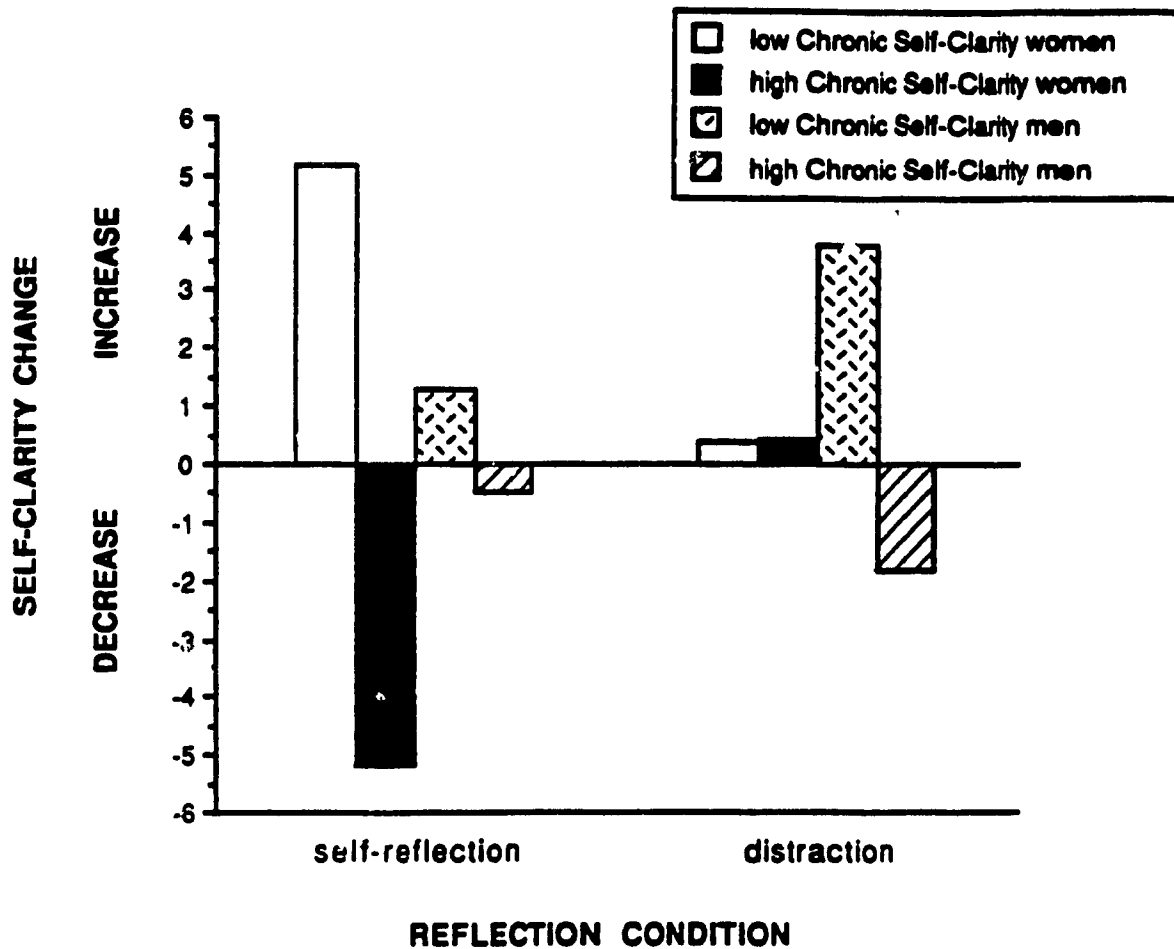
Figure 2

The Influence of Self-Reflection on Self-Concept Clarity

Change in Low and High Chronic Clarity Men and Women (Study

2)

Table 4

Mean Self-Clarity Scores for Low and High Chronic Clarity Men and Women in the
Reflection and Distraction Conditions (Study 2)

Reflection Condition

	Men		Women	
	Low Clarity (n = 10)	High Clarity (n = 10)	Low Clarity (n = 10)	High Clarity (n = 12)
Pre-Reflection				
M	41.4	25.0	44.2	25.1
SD	3.6	2.7	3.3	2.9
Post-Reflection				
M	40.1	25.5	39.0	30.3
SD	6.5	3.7	7.7	7.9
Pre-Post Clarity Difference	(1.3)	(-0.5)	(5.2)	(-5.2)

Distraction Condition

	Men		Women	
	Low Clarity (n = 10)	High Clarity (n = 10)	Low Clarity (n = 10)	High Clarity (n = 11)
Pre-Distraction				
M	41.8	24.2	41.2	24.1
SD	3.4	2.5	3.3	4.1
Post-Distraction				
M	38.0	26.0	40.8	23.6
SD	8.7	6.2	10.0	5.4
Pre-Post Clarity Difference	(3.8)	(-1.8)	(0.4)	(0.5)

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As mentioned above, the interaction between Clarity and time was not significant for women in the distraction condition. Women in the distraction condition did not demonstrate any significant change in self-clarity (Fs< 1). The results for women replicate those of Study 1 and provide support for the hypothesis that self-reflection reduces self-clarity for high Chronic Clarity women and increases self-clarity for low Chronic Clarity women.

Self-clarity difference scores were calculated as in Study 1. Positive difference scores indicate increased self-clarity whereas negative difference scores indicate decreased self-clarity. Tukey post-hoc analyses of clarity difference scores revealed a significant difference between high Clarity women in the reflection (M = -5.2) and distraction conditions (M = .5; F(1, 21) = 4.4, p< .05). In addition, following reflection high Clarity women relative to low Clarity women evidenced a significantly greater decrease in clarity (F(1, 20) = 10.8, p< .01). Low Clarity women in the reflection condition tended to evidence greater increases in clarity (M = 5.2) than low Clarity women in the distraction condition (M = .4), however, the difference was not significant. As such, the results for self-clarity change fully replicate those obtained in Study 1.

Self-Reflection Transcripts.

Analyses were then conducted to examine possible group

differences in the quantity of reflection that occurred for subjects in the reflection condition as a consequence of the self-reflection manipulation. As in Study 1, responses to the self-reflection questions were transcribed and scored for total number of words written. A 2 (Chronic Clarity) X 2 (Gender) ANOVA on total number of words written by subjects in the self-reflection condition revealed no significant effects. High Clarity and low Clarity subjects did not differ in the number of words written during self-reflection. On average, subjects wrote 364 ($\underline{SD}$ = 117) words in response to the self-reflection questions (high Clarity: $\underline{M}$ = 370, $\underline{SD}$ = 124; low Clarity: $\underline{M}$ = 356, $\underline{SD}$ = 110).

Self-Description Response Latency. Self-description response latency was a secondary measure of self-clarity. Longer response latencies are taken to reflect less certainty of self-beliefs. Based on the results of Study 1, it was expected that high Clarity women will evidence longer self-description response latencies following reflection relative to high Clarity women in the distraction condition. In contrast, low Clarity women were expected to evidence shorter response latencies following self-reflection relative to low Clarity women in the distraction condition. No differences in response latency were expected for men.

A 2 (Chronic Clarity) X 2 (Reflection Condition) X 2

(Gender) between subjects ANOVA on mean latency scores was conducted. Counter to expectations, the Chronic Clarity X Reflection Condition X Gender interaction was not significant ($F <$ 1). As in Study 1, the analysis did reveal a significant main effect for gender ($F(1, 75) = 8.1$, $p <$ .01). Across reflection condition and Chronic Clarity, women evidenced shorter response latencies ($M = 1574$, $SD =$ 394) than men ($M = 1958$, $SD = 808$). The analysis also revealed a significant Chronic Clarity X Gender interaction ($F(1, 75) = 5.3$, $p <$ .03). Further analyses indicated that this latter interaction reflects the fact that low Chronic Clarity men evidenced significantly longer response latencies than high Chronic Clarity men ($F(1, 38) = 5.6$, $p <$ .03); there was no significant difference between low and high Chronic Clarity women ($F <$ 1; see Table 5 for mean self-description response latency scores for low and high Chronic Clarity men and women).

Trait Valence Ratings

Analyses were conducted to address possible group differences in subjects' valence ratings of their three self-descriptive personality traits. The 2 (Chronic Self-Clarity) X 2 (Reflection Condition) X 2 (Gender) ANOVA on trait valence ratings revealed a significant main effect for Chronic Clarity group ($F(1, 75) = 4.0$, $p <$ .05) and no other significant effects. Across reflection condition and gender, high Clarity subjects rated their self-descriptive

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Table 5

Mean Self-Description Latency Scores (MS) for Low and High Chronic Clarity Men
and Women (Study 2)

	Men	Women
Low Clarity		
M	2244.8	1546.8
SD	1035.5	363.7
n	20	20
High Clarity		
M	1671.7	1598.5
SD	309.7	425.9
n	20	23

traits as more positive ($\underline{M}$ = 6.5, $\underline{SD}$ = 3.9) than low

Clarity subjects ($\underline{M}$ = 4.5, $\underline{SD}$ = 5.1). This result is

consistent with that obtained in Study 1 for trait valence

ratings.

Affect

Affect was measured immediately before (pre) and after

(post) the reflection manipulation for subjects in the

self-reflection condition and at corresponding times for

subjects in the distraction condition. Two separate

cluster analyses were first conducted on the pre and post

affect items, respectively. The two analyses revealed

identical results. Two major clusters emerged. Cluster

scores were derived by averaging responses to items on the

respective clusters. All items on each cluster were highly

correlated ($\underline{r}$s> .50, $\underline{p}$s < .05). Higher scores on each

cluster reflect more extreme affect. The positive affect

cluster consisted of the items content, good, happy,

pleased, satisfied, and strong. The negative affect

cluster consisted of the items discouraged, miserable, sad,

sorry, and unhappy. Both affect clusters are identical to

those obtained in Study 1 with the one exception that the

negative affect cluster obtained in Study 1 also contained

the item lonely. As in Study 1, the positive affect

cluster for the pre period and the positive affect cluster

for the post period were positively correlated ($\underline{r}$(82) =

.83, $\underline{p}$< .01) as were the negative affect clusters for the

pre and post period ($r(82)$ = .88, $p<$ .01). In addition, the positive and negative affect clusters were found to be highly negatively correlated at both pre ($r(82)$ = -.50, $p<$ .01) and post ($r(82)$ = -.40, $p<$ .01) periods.

Positive and negative affect were analyzed in a 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) X 2 (Time: pre versus post) between-within MANOVA. Prior to analyses, negative affect cluster scores were first subjected to a square root transformation as they were found to be positively skewed. The MANOVA revealed a marginally significant Reflection Condition X Time interaction ($F(1, 75)$ = 3.6, $p<$ .07). Univariate analyses, however, revealed that the Reflection Condition X Time interaction was nonsignificant for positive and negative affect examined separately. The MANOVA revealed no other significant interactions or main effects. As in Study 1, there was no significant change in affect for any of the conditions.

Attitude Certainty

A 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) between subjects ANOVA was conducted on certainty of attitudes unrelated to the self. The analyses revealed a marginally significant main effect for Chronic Clarity ($F(1, 75)$ = 3.7, $p<$ .06) and no other significant effects ($Fs<$ 1). As in Study 1, across reflection condition and gender, low Clarity subjects tended to evidence less

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certainty ($\underline{M}$ = 28.1, $\underline{SD}$ = 7.0) than high Clarity subjects ($\underline{M}$ = 25.6, $\underline{SD}$ = 4.6). In contrast, the finding in Study 1 that reflection generates decreased certainty of beliefs was not replicated in the present study.

Analyses were then conducted to explore the magnitude of discrepancy between subjects' attitude-certainty and their self-concept clarity. Attitude-self discrepancy scores were computed by subtracting subjects' self-clarity scores obtained at the time of the study from their attitude-certainty scores. Thus, positive discrepancy scores indicate that self-certainty is greater than attitude-certainty whereas negative discrepancy scores indicate that self-certainty is less than attitude-certainty. A 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (Gender) between-subject ANOVA on attitude-self discrepancy scores revealed a significant main effect for Chronic Clarity ($\underline{F}$(1, 75) = 30.0, $\underline{p}$< .001). As found in Study 1, low Clarity subjects evidenced a greater negative discrepancy between attitude certainty and self-clarity ($\underline{M}$ = -11.4, $\underline{SD}$ = 9.7) than high Clarity subjects ($\underline{M}$ = -.83, $\underline{SD}$ = 7.6). Relative to high Clarity subjects, low Clarity subjects demonstrated less certainty over self-beliefs than certainty of attitudes unrelated to the self. No other significant effects emerged.

Discussion

The results of Study 2 indicate that reflection decreases the self-clarity of women high in Chronic Clarity and increases the self-clarity of women low in Chronic Clarity. Such a moderation effect did not occur for high and low Clarity women who did not engage in reflection or for men in either the reflection or distraction conditions. The changes in clarity evidenced by women following self-reflection were not accompanied by corresponding changes in affect and attitude-certainty. In addition, as in Study 1, high Clarity women evidenced decreased clarity following reflection despite the fact that they reflected upon more positive self-beliefs than low Clarity women who evidenced increased clarity. These findings replicate those of Study 1 and provide further support for the moderation effect of reflection on clarity in high and low Chronic Self-Clarity women. The other finding of Study 1 concerning the impact of self-reflection on attitude-certainty was not, however, replicated in Study 2 and thus appears unreliable.

The changes in clarity evidenced by women following self-reflection in Studies 1 and 2 were not accompanied by changes in affect. The present null findings for affect appear inconsistent with previous research by Baumgardner (1990) demonstrating more positive self-affect with increased self-certainty. Affect as examined in the present research was not, however, specifically self-

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related, whereas the measure taken to reflect positive affect in Baumgardner's research was highly tied to the self, including items such as competent, smart, and confident (Baumgardner, 1990). The latter research may best be construed as reflecting a change in self-concept or perceived self-efficacy as opposed to a change in affect.

In Studies 1 and 2, changes in the general clarity of the self-concept were evidenced by subjects who reflected upon three of their self-beliefs. The results suggest that reflection on a few specific self-beliefs can influence individuals' global evaluation of the self-concept. Reflection on self-beliefs may increase their availability and thereby give them greater weight and relevance than other self-beliefs for present evaluations and judgments of the self. In day to day life, reflection may operate in a similar manner to influence individuals' global self-representation. Specifically, individuals likely reflect upon a limited amount of domain specific self-beliefs (e.g., intelligent, competent) that are made salient by their present situation (e.g., school, work) at any given time.

Gender differences in the impact of self-reflection on clarity in low and high Clarity individuals appear reliable as the same pattern of gender differences was obtained in Studies 1 and 2. These results suggest that self-reflection may be most relevant for women's sense of self.

As mentioned above, research by Ingram et al. (1988) also suggests that women are more responsive to manipulations aimed at directing attention toward the self than are men. The question remains why women evidence greater responsiveness to self-reflection in terms of their self-clarity than men? In Western culture, women appear to have greater experience in discussing, thinking about, and explaining their inner thoughts and feelings, relative to men (cf. Belenky, Clinchy, Goldberger & Tarule, 1986). That women may have a propensity toward self-reflection is indeed consistent with women's greater interpersonal and interdependent socialization experience (cf. Spence, Deaux, & Helmreich, 1984). As well, such self-reflective thinking may be particularly relevant for how women construe the self and develop clarity and confidence of self-beliefs. In contrast, men may be less familiar with self-reflective thinking and reflection may not be as relevant for their sense of self-clarity. Women's greater familiarity with self-reflective thinking may account for their heightened responsiveness to the reflection task employed in Studies 1 and 2. Specifically, if self-reflection is engaged in routinely by women in their day to day lives, then the self-reflection task may have been more meaningful for women and perhaps more relevant for their self-clarity. For men, the reflection task may have been more unusual and may have had less relevance for the clarity of their self-

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beliefs. Study 3 addressed the possibility that women have a greater propensity to engage in self-reflection than men and that self-reflection is more relevant for the clarity of self-beliefs for women than men.

Study 3

Study 3 examined whether women have greater experience in asking themselves self-reflecting questions than men and whether the propensity to engage in self-reflection also depends upon individual differences in Chronic Self-Clarity. That individuals high in Self-Clarity evidence greater defensiveness suggests that they may not readily engage in reflection and introspection. Thus, high Clarity individuals may be expected to evidence less self-reflective thinking than low Clarity individuals. This may, however, be further qualified by gender differences in the propensity to self-reflect. Specifically, if self-reflection is particularly relevant for women's self-clarity then it may be expected that differences in the tendency to engage in reflection may be more pronounced between low and high Clarity women than between low and high Clarity men.

In Study 3, low and high Clarity men and women reported the frequency with which they ask themselves self-reflecting questions. The self-reflection questions were those used for the reflection induction employed in Studies 1 and 2. As well, a global measure of the extent to which individuals reflect about themselves, their thoughts and motives, as employed in the research on private self-consciousness (e.g., Burnkrant & Page, 1984; Campbell et al., 1994), was included to further explore the specific

nature of potential gender differences in reflection.
Gender differences in global reflection on the self, one's
thoughts and motives have generally not been reported in
the extant literature. The major hypothesis in Study 3 was
that women engage in more self-reflection than men. In
addition, it was hypothesized that the tendency to engage
in self-reflection will depend upon an individual's chronic
level of Self-Clarity. Specifically, women high in Clarity
were expected to report less self-reflection than women low
in Self-Clarity. Low and high Clarity men were not
expected to differ to the same degree as their female
counterparts in the propensity to engage in self-
reflection.

Method

Subjects and Procedure

Subjects were recruited from a booth on the Sir George Williams campus of Concordia University. A sign announced that volunteers were needed to complete questionnaires for a psychology project. Volunteers were offered lottery prizes for their participation. The questionnaires were to be completed immediately at the booth. All questionnaires relevant to the present study are described below. In total, 159 subjects (95 women and 64 men) between the ages of 18 and 30 (M = 22.9, SD = 3.2) participated.

Measures

A <u>trait-reflection frequency questionnaire</u> was constructed for the purposes of the present study. The questionnaire was designed to assess the frequency with which individuals ask themselves self-reflecting questions. The six reflecting questions were those used in Studies 1 and 2 to induce self-reflection during the reflection period. On the questionnaire, subjects were first instructed to think of a word that describes their personality (see Appendix R for a copy of the Trait-Reflection Frequency Questionnaire). Subjects were then asked to indicate how frequently they ask themselves each of the questions in regard to their selected personality characteristic. Subjects responded on 5-point scales with endpoints labeled <u>almost never ask myself</u> (1) and <u>almost</u>

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<u>always ask myself</u> (5). The order of the six questions was counterbalanced to create four different orders. The four orders were identical to those created for the reflection manipulation used in Studies 1 and 2.

Subjects also completed the <u>Private Self-Consciousness subscale</u> (PrSC) of the Self-Consciousness Scale (SCS; Fenigstein, Scheier, & Buss, 1975; see Appendix S). The SCS has demonstrated validity as a measure of self-consciousness (Turner, Scheier, Carver, & Ickes, 1978). The PrSC subscale of the SCS is composed of two separate, although related, dimensions: self-reflectiveness (hereafter referred to as <u>inward-reflectiveness</u> to distinguish it from other forms of reflection) and internal state awareness (Burnkrant & Page, 1984; Mittal & Balasubramanian, 1987; Piliavin & Charng, 1988). Inward reflectiveness refers to the tendency to reflect upon the self or deliberate about one's self and motives beyond a focus on one's own personality ascriptions to self, whereas internal state awareness refers to awareness of one's own feelings and thoughts. Inward-reflectiveness is assessed by items 1, 5, 15, and 18 of the SCS and internal awareness is assessed by items 3, 13, 20, and 22 (see Table 1 in Mittal & Balasubramanian, 1987). Inward-reflectiveness items are face valid (e.g., "I reflect about myself a lot", I'm constantly examining my motives"). Higher scores reflect greater inward-reflectiveness and internal

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awareness.

Other materials included in the questionnaire packet relevant to the present study were the Self-Concept Clarity Scale (Campbell et al., 1994) and the Rosenberg (1965) Self-Esteem Scale. Questions on age, gender, language use, and prior research experience were also included in the questionnaire packet. Questionnaires were presented in counterbalanced order.

Results

The principal measure of interest was the trait-reflection frequency questionnaire. An overall score was derived by averaging subjects' responses. Scores on the trait-reflection frequency questionnaire were normally distributed. The mean reflection score was 2.9 ($\underline{SD}$ = .85); scores ranged from 1 to 4.8. Cronbach alpha for the reflection questionnaire was .84, suggesting satisfactory reliability. A principal components factor analysis revealed 1 factor with an eigenvalue of 3.4 that accounted for 56% of the variance. All items had high factor loadings (> .72). The trait-reflection frequency questionnaire thus appears to be a unitary measure of the frequency with which individuals ask themselves questions about their own personality characteristics. Trait-reflection frequency was found to be significantly positively correlated with the inward-reflectiveness component of the PrSC ($\underline{r}$(158) = .53, $\underline{p}$< .01).

The major hypothesis was that women engage in reflection on their own personality characteristics more frequently than men. It was also expected that reflection frequency will be a function of Chronic Self-Concept Clarity. Specifically, low Clarity women were hypothesized to evidence greater trait-reflection frequency than high Clarity women. A lesser difference in reflection frequency was expected between low and high Clarity men. To examine

such group differences in a manner consistent with Studies 1 and 2, high and low Clarity subjects were selected from the overall sample. Subjects were considered high in Self-Clarity if they scored at or below the 25th percentile (a raw score of 27) of the SCCS distribution. Subjects were considered low in Self-Clarity if they scored at or above the 75th percentile (a raw score of 41) of the SCCS distribution. In total, 36 high Clarity subjects (21 women and 15 men) and 40 low Clarity subjects (26 women and 14 men) were selected. The mean SCCS score for low Clarity subjects was 45.9 ($\underline{SD}$ = 3.8) and the mean SCCS score for high Clarity subjects was 22.9 ($\underline{SD}$ = 4.1).

Prior to analyses, trait-reflection frequency and inward-reflectiveness data were examined for univariate outliers within each group of the 2 (Gender: women vs. men) by 2 (Chronic Self-Clarity: high vs. low) between-subject factorial design. One case with a high negative $\underline{z}$ score on trait-reflection frequency was found to be an univariate outlier. For analyses of grouped data, the score for this person was excluded. A 2 (Gender: men vs. women) X 2 (Chronic Self-Clarity: high vs. low) between subjects MANOVA was conducted on trait-reflection and inward reflectiveness scores. Tests for normality and homogeneity of variance revealed that these assumptions were not violated. The analysis was conducted using unweighted means due to unequal cell sizes. The expected effects were

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a univariate effect for gender and an interaction between gender and Chronic Clarity for trait-reflection frequency. The analysis revealed a multivariate main effect for gender ($F(1, 71)= 3.3$, $p< .05$). As expected, further univariate analyses revealed that the significant gender difference occurred for trait-reflection frequency ($F(1, 71) = 5.6$, $p< .02$) and not for inward-reflectiveness ($F< 1$). Across clarity condition, women reported greater trait-reflection frequency ($M = 3.1$, $SD = .82$) than men ($M = 2.7$, $SD = .87$). A score of 3 on trait-reflection indicates that individuals sometimes ask themselves the self-reflecting questions, whereas a score of 2 indicates that they only occasionally ask themselves the reflecting questions. The analysis also revealed a significant multivariate main effect for Chronic Clarity group ($F(1, 71) = 9.2$, $p< .001$). Univariate analyses revealed that the Clarity main effect was significant for both trait-reflection frequency ($F(1, 71) = 13.3$, $p< .001$) and inward-reflectiveness ($F(1, 71) = 14.9$, $p< .001$). Low Clarity subjects evidenced greater trait-reflection frequency ($M = 3.4$, $SD = .75$) and greater inward-reflectiveness ($M = 14.7$, $SD = 3.2$) than high Clarity subjects (reflection frequency: $M = 2.6$, $SD = .90$; inward- reflectiveness: $M = 11.0$, $SD = 4.4$). The expected interaction between gender and chronic clarity was, however, nonsignificant, $F < 1$. Thus, the hypotheses of Study 3 received only partial support.

Correlations between all measures were then examined
in the overall sample, for women and men separately, with
the data of subjects with extreme self-esteem scores not
included in the analyses so as to parallel the conditions
of Studies 1 and 2. As in Study 2, the 25th and 75th
percentiles were used as cutoffs for self-esteem. Analyses
revealed that, for women, lower self-clarity is associated
with greater trait-reflection frequency ($r(55) = .40$, $p<$
.01) and greater inward-reflectiveness ($r(55) = .33$, $p<$
.05). For men, lower self-clarity was not significantly
associated with greater trait-reflection frequency ($r(32) =$
.24, ns) nor with greater inward-reflectiveness ($r(32) =$
.09, ns). The correlation between reflection frequency and
self-clarity for women was not, however, significantly
different from that observed for men ($t< 1$). For both men
and women reflection frequency was not significantly
related to self-esteem (men: $r(32) = -.19$, ns; women: $r(55)$
$= -.23$; ns; see Tables 6 and 7 for correlations between all
measures, for women and men, respectively). This pattern
of findings lends support to the hypothesis that the
propensity to engage in self-reflection is more strongly
associated with self-concept clarity for women than for
men.

Table 6

Correlations among Measures of Self-Clarity, Reflection, Self-Esteem and Internal Awareness for Women (Study 3)

Measure	Self-Clarity	Trait-Reflection Frequency	Inward-Reflectiveness	Internal Awareness
Self-Esteem	-.16	-.23	-.04	-.01
Self-Clarity		.40**	.33*	-.05
Trait-Reflection Frequency			.64**	.34*
Inward-Reflectiveness				.38**

Note. N = 56.

* p < .05. ** p < .01.

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Table 7

Correlations among Measures of Self-Clarity, Reflection, Self-Esteem and Internal Awareness for Men (Study 3)

Measure	Self-Clarity	Trait-Reflection Frequency	Inward-Reflectiveness	Internal Awareness
Self-Esteem	-.54**	-.19	-.26	.09
Self-Clarity		.24	.09	-.45**
Trait-Reflection Frequency			.47**	.01
Inward-Reflectiveness				.34*

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Note. N = 33.

* p < .05. ** p < .01.

Discussion

The results of Study 3 suggest that women ask themselves self-reflecting questions more than men. Women and men did not differ, however, in the extent to which they reported reflecting about the self, their thoughts and their motives in general. Thus, gender differences in the propensity to engage in reflection appear related to an aspect of self-reflection that specifically involves the questioning of one's beliefs concerning one's own personality characteristics.

The present findings suggest that women may have been more familiar with the self-reflection task in Studies 1 and 2 than men. Women's greater familiarity with such self-reflection in their day to day lives may have rendered the self-reflection manipulation somewhat more meaningful and relevant for women than for men. In addition, the results of Study 3 suggest that reflection on specific self-beliefs and on one's own thoughts and feelings is more strongly related to self-clarity for women than for men. For men, reflection frequency and reflection on thoughts and feelings were not significantly related to self-clarity. This pattern of relations was evidenced in a sample that was identified in the same manner as in Studies 1 and 2, and the pattern is consistent with the gender differences in the impact of reflection on clarity obtained in Studies 1 and 2. Specifically, in Studies 1 and 2,

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women were found to be more affected by reflection than men.

The question remains as to why women may generally reflect more upon their self-beliefs than men. One may speculate that women's heightened self-reflectiveness is related to their greater interdependent and interpersonal socialization in Western culture. For women, the ability to reflect upon and question their own characteristics, behaviors, and goals may be important for the development and maintenance of interpersonal relationships. Women are socialized to be attentive to the thoughts and feelings of others (cf. Spence, Deaux, & Helmreich, 1984); reflecting upon the self may provide a mechanism through which women attempt to achieve such an understanding of others.

The results of the present study raise a number of issues concerning the specific nature of gender differences in self-reflection and the conceptualization of the self-reflection process. As mentioned above, although women reported that they ask themselves reflecting questions more than men, women did not report a greater general tendency to engage in inward-reflective thinking, relative to men. It appears that the type of trait-reflection upon one's self-concept assessed by the trait-reflection frequency questionnaire involves a form of examination or analysis not specifically assessed by the inward-reflectiveness component of the PrSC. Items on the inward-reflectiveness

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component of the PrSC assess the degree to which

individuals reflect and think about their thoughts and

motives and do not explicitly address reflection on self-

beliefs per se. Study 3 suggests that distinctions in the

nature of self-reflection are relevant to a better

understanding of the relations between gender and a

reflective orientation toward the self.

General Discussion

Studies 1 and 2 addressed whether self-reflection influences an individual's sense of clarity regarding the self. The moderation hypothesis was that self-reflection decreases the clarity of individuals high in Chronic Clarity and increases the clarity of individuals low in Chronic Clarity. In Studies 1 and 2, high and low Clarity individuals were led to either reflect upon their self-beliefs or were distracted from self-reflection. Self-clarity was assessed before and after the reflection and distraction periods. In support of the hypothesis, both studies revealed that self-reflection decreased self-clarity in high Clarity women and increased self-clarity in low Clarity women; this moderation effect was not demonstrated for men who engaged in self-reflection. There was no reliable change in self-clarity in Studies 1 and 2 for women and men in the distraction condition. The findings of Studies 1 and 2 were corroborated by the results of Study 3 that addressed gender differences in the propensity to engage in self-reflection in high and low Clarity individuals. The major hypothesis in Study 3 was that women have a greater tendency to ask themselves self-reflecting questions than men. As expected, the results of Study 3 indicate that women evidence a greater tendency to ask themselves self-reflecting questions relative to men. As well, the relation between reflection and clarity was

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found to be stronger for women than for men, in that reduced clarity was associated with greater self-reflection for women but not for men.

That individuals low in Chronic Self-Clarity also evidenced reduced certainty of attitudes not related to the self, relative to high Clarity individuals, raises concerns regarding the specificity of self-concept clarity. The present results suggest that individuals low in Chronic Clarity may have a general tendency to be uncertain about their beliefs, opinions, and values, in addition to having a particular lack of clarity regarding self-beliefs. Across Studies 1 and 2, low Clarity individuals were more uncertain about their attitudes than high Clarity individuals: as well, low Clarity individuals demonstrated less certainty regarding the self relative to their certainty for attitudes. The present findings contrast with that of previous research that has addressed the specificity of self-certainty by comparing certainty of self-beliefs with certainty of beliefs about others (Baumgardner, 1990; Experiment 3). In the latter study, individuals low in self-esteem demonstrated less certainty over self-beliefs but not less certainty regarding their beliefs about a friend, relative to high self-esteem individuals. In light of the present findings, a reconsideration of the link between self-clarity and clarity concerning other attitudes and beliefs is

warranted.

That self-reflection was found to be more relevant for women than for men's self-concept clarity in Studies 1 and 2 and that women reported engaging in self-reflection more frequently than men in Study 3 appears consistent with women's greater interpersonal and interdependent socialization experience. Women in Western societies are typically encouraged to be attentive and responsive to the needs and feelings of others (cf. Spence, Deaux, & Helmreich, 1984). Perhaps such attentiveness to others' feelings and thoughts necessitates that women be readily able to reflect upon and examine their own characteristics and behaviors. That is, being encouraged to consider their own contribution to the well-being and feelings of those around them, women may employ self-reflection to scrutinize themselves and monitor their own behavior. Women's greater tendency to be reflective and to acknowledge how their own behavior, feelings, and characteristics may affect others also appears consistent with the fact that women occupy a lower status than men in society (Connell, 1987; Lips, 1991; Rhoodie, 1989). In contrast, individuals who occupy higher status positions in society need not be so concerned with how their own behavior impacts upon others, and hence, they may not need to engage in as much self-reflection. In sum, resulting from these socialization factors, self-reflection may come to be strongly tied to a woman's sense

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of self-clarity, self-understanding, and identity.

It appears paradoxical that, on the one hand, heightened self-reflection was found to be associated with reduced clarity in Study 3 and, on the other hand, self-reflection actually increased the self-clarity of low Clarity women in Studies 1 and 2. Why is greater reflection frequency in everyday life associated with chronic reduced clarity (as in Study 3) if a period of reflection in the laboratory increases the clarity of low Clarity women? This paradox may be resolved, in part, if one considers potential differences between the self-reflection manipulation employed in the present research and the type of self-reflection low Clarity women may experience in their day to day lives. Self-reflection in Studies 1 and 2 was a structured task that required subjects to articulate and write their thoughts during self-reflection. As such, the task required that individuals construct a somewhat coherent narration describing the contents of their self-reflection. This type of experimentally induced self-reflection may differ in important ways from more naturally occurring reflection. Reflection that occurs only within one's internal awareness or private consciousness is likely far less structured, organized, and coherent. As well, during private self-reflection, thoughts may turn to other concerns and associations that are made salient during the self-

reflective process.

The results of the present research were obtained for high and low Clarity individuals who were moderate in self-esteem. In Study 1, when the data of subjects with extreme self-esteem scores were included, self-reflection was found to have no systematic impact on self-concept clarity. The results of the present research suggest that women with extreme levels of self-esteem may not be influenced by reflection. Perhaps individuals with very high self-esteem are so well defended against threats to their positive view of self and self-certainty that they are readily able to disregard the impact and relevance of self-reflection. Conversely, individuals very low in self-esteem may have difficulty trusting the validity and merits of their own self-reflection and would require more evidence concerning their own stability and clarity than that generated by self-reflection. The potential relevance of self-esteem for the impact of reflection on clarity in high and low Chronic Clarity individuals was not, however, explicitly examined in the present studies. Nor did the present research address the impact of reflection on self-esteem. It seems likely that the impact of reflection on self-esteem would depend on the valence of self-beliefs selected for reflection (cf. Sedikides, 1992).

The endurance and importance of the obtained reductions and increases in self-clarity found in Studies 1

and 2 for high and low Clarity women, respectively, may be limited. The changes in self-clarity evidenced in the present research may represent relatively short lived effects. Indeed, it is highly unlikely that the brief reflection manipulation employed in the present research was powerful enough to generate lasting changes in an individual's chronic level of self-concept clarity. As identified by Campbell et al. (1994), individual differences in self-clarity as assessed by the SCCS are stable over time. The present research does, however, raise the question as to whether individual differences in self-clarity may be somewhat less stable for women than for men. In their day to day lives women may experience a variety of situations that lead them to reflect upon themselves and that may, in turn, influence their level of self-clarity. One should also note that although high Clarity women experienced reduced self-clarity following reflection, such decreases in clarity were relative to their previous high level of clarity and did not render them low in Clarity in an absolute sense. The same issue applies to the increases in self-clarity evidenced by low Clarity women following reflection. Low Clarity women did not achieve sufficient increases in clarity to render them high in Self-Clarity.

The results of the present research are consistent with a recent demonstration by Norem and Illingworth (1993)

of the role of individual differences in determining the impact of self-reflection on behavior and emotion. In this research, reflecting on the self and one's goals has been found to enhance performance on a problem solving task and to reduce anxiety in individuals who characteristically set low expectations for their performance as a strategy to motivate themselves (so called defensive pessimists). In contrast, reflection has been found to interfere with performance and increase anxiety in individuals who characteristically set high expectations for their performance (optimists). The distinctions between the defensive pessimist and optimist and their differential reactions to self-reflection are quite consistent with the views advanced in the present thesis. In particular, a parallel can be drawn between the optimist and the high Clarity individual (both of whom appear to overestimate the self), and between the defensive pessimist and the low Clarity individual (both of whom tend to underestimate the self). Gender differences were not, however, observed in the research by Norem and Illingworth.

The present research raises a number of methodological and conceptual issues regarding the process of self-reflection. Although gender differences in self-reflection were obtained in Study 3 using a measure of the extent to which individuals ask themselves self-reflecting questions concerning specific self-beliefs, no gender differences

were found in the global tendency to reflect upon thoughts and feelings. The results of Study 3 suggest that self-reflection should be regarded as a multifaceted process that can include a variety of different targets such as self-beliefs, thoughts, feelings, motives, and values. In addition, it seems likely that there also exist different qualities of self-reflective thought. Specifically, reflection may at different times and for different individuals include processes such as self-questioning, an internal dialogue or self-talk, rumination, abstract philosophical pondering, or fantasy. In Study 3, subjects were explicitly asked to think of one of their personality characteristics and to evaluate the degree to which they ask themselves self-reflecting questions regarding this characteristic in their daily lives. This latter form of self-reflection indeed seems distinct from a more general and expansive reflection on one's thoughts, feelings, and motives that may or may not involve self-questioning. Recent theory and research on reflection and rumination also suggests the relevance of distinguishing between different qualities of self-reflection (e.g., Campbell et al., 1994; Stanton, Danoff-Burg, Cameron, & Ellis, 1994). Notably, Campbell et al. (1994) have proposed that individuals may engage in different types of self-reflection depending on their present motivational concerns. According to Campbell et al., threat or anxiety

may promote a ruminative reflection in which individuals experience repetitive and uncontrolled self-related thoughts of a negative affective tone. In contrast, interest and curiosity about the self may promote a more philosophical reflection that involves an affectively positive exploration of one's inner thoughts, feelings, and values.

Clinical Implications

Self-reflection may be beneficial for one's understanding and acceptance of self. Self-reflection in Studies 1 and 2 enabled low Clarity women to better succeed in their quest for greater clarity and certainty regarding the self. In addition, one may construe high Clarity women's reaction to self-reflection as a less defensive consideration of the self and as greater acceptance of ambiguity regarding the self. In essence, self-reflection appears to foster a more balanced, and perhaps more adaptive, view of self, and may contribute to better psychological adjustment. Self-reflection has indeed been considered an essential therapeutic component of diverse forms of psychotherapy (e.g., psychodynamic, cognitive-behavioral, humanistic-existential; Goldberg, 1991; Mahoney, 1991). The results of the present research lend some preliminary empirical support regarding the therapeutic role of self-reflection as a process for promoting enhanced psychological functioning.

Specifically, self-reflection may be particularly relevant for promoting therapeutic change in women's sense of coherence and clarity regarding the self.

A client's ability to reflect upon the self has been deemed vital for positive psychotherapeutic change (Mahoney, 1991). Indeed, poor capacity for self-observation and reflection is regarded as a contraindication for some forms of psychotherapy, particularly dynamic therapies (e.g., Weiner, 1975). A limited capacity for insight is usually associated with high defensiveness and a concomitant difficulty in contemplating and accepting novel interpretations of one's behaviors, thoughts, and emotions. Psychotherapy is usually not attempted with individuals who demonstrate such a limited capacity for insight. The design and results of the present research suggest however that it may be possible to promote, at least for a brief period, a state of self-reflection in individuals who may not demonstrate a proclivity for reflection in their day to day lives, and that such induced self-reflection may effect change in their self-understanding.

Confusion regarding one's sense of self, feelings of inner emptiness or a perceived loss of self, and difficulties in the consolidation of identity are among some of the more prevalent complaints raised by individuals seeking psychotherapy in modern times (cf. Lasch, 1980). A

lack of coherence and ambiguity regarding the self is
indeed a central feature of many psychological disorders
(cf. American Psychiatric Association, [Diagnostic and
statistical manual of mental disorders - fourth edition],
1994). The present research suggests that self-reflection
may provide one possible mechanism through which such
disturbances in the sense of self may be readily approached
in a therapeutic context. In particular, it may be
suggested, albeit tentatively, that individuals who
evidence a lack of clarity regarding the self and identity
will benefit from highly structured and guided self-
reflection that focuses on specific self-beliefs. A
consideration of the implications of the present research
for clinical populations and practice need be tempered by
the fact that subjects were drawn from a university student
population and that the self-reflection manipulation was
confined to one period of solitary writing. It remains,
however, that the present research is one of the first to
empirically address the influence of self-reflection on
individuals' clarity and certainty regarding the self with
any population.

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Appendix A

Instructions for Trait Generation Task

Instructions

For this task you will be asked to write down some things about yourself. Let's go over some instructions. People may use different words to describe themselves. For example, a person may say that he or she is shy or sociable, lazy or hard-working. These words describe different personality characteristics. We are interested in the personality characteristics that you feel best describe you. Please think about what kinds of words you would use to describe yourself.

Here is a sheet of paper. Please write down the words that you feel describe yourself. Write one word on each of the lines in the order that they come to mind. Write down as many as you like, you can use the space below the lines if you need. Don't be concerned about spelling. And write what ever you want.

Appendix B

Instructions for Stream of Consciousness Writing Task

Instructions

In this next task, we are interested in natural
thought processes. Now let me tell you what I mean.
Often, in daily life, we think of things, we plan things in
our minds. We do this naturally, in our heads, it is as if
we are talking to ourselves, the only difference being that
we do not talk aloud. For example, when we wait for the
bus, or when we are on the metro, we might think of all
sorts of things. Such as where we are going, what we have
to do that day. If you are waiting for the bus, for
example, you might see a nice sports car go by and you
might think to yourself, "Hay, that's a nice car". This is
what I mean by natural thought processes. That is, we
often think to ourselves as if we are talking out loud.

I will be asking you to sit alone for a little while
and to write down all of your thoughts. So just let your
thoughts go and simply write down what ever is going
through your mind. If you find yourself stopping, we would
like you to keep writing, because it is not the same if you
stop. Also, don't be concerned about grammar, or
punctuation, or anything like that. I'll leave you here to
do that, and I'll be back in about 5 minutes.

Appendix C

Questions Used to Induce Self-Reflection

Questions For Self-Reflection

Why do you think you have this characteristic?

What does it mean to you to have this characteristic?

Why do you see yourself this way?

In what ways might people notice this about you?

In what ways is this characteristic important or not important to you?

How does this characteristic relate to other characteristics that you have?

Appendix D

Instructions for Self-Reflection Manipulation

Instructions Supplied by Experimenter

For this I'll be asking you to listen to some standard instructions on the tape recorder. Basically you will be asked some questions concerning your characteristics. Please write down you answers. And remember that your responses are confidential, everything is done by code numbers. Please start writing as soon as you have heard the end of a question because, like before, we are interested in natural thoughts. There is a standard amount of time for each question. You might run out of time when answering a question, that's ok and if you have extra time just keep writing. (Experimenter turns on tape and leaves room).

Example of Audio-Taped Instructions

You will be asked some questions about your three characteristics. These are questions that people may ask themselves from time to time. Please write down on one of the sheets, the first characteristic. To repeat, please write down the first characteristic. I will now ask you some questions. After each question there will be a silence on the tape for a few minutes. Please start writing as soon as you have heard the question and try to continue writing until you hear that it is time to stop. We are interested in natural thought processes. Here is the first question.

Appendix E

Rosenberg Self-Esteem Scale

SES

Please decide whether you agree or disagree with each statement below. Indicate the extent to which you agree or disagree by circling the appropriate number on the scale.

1. On the whole, I am satisfied with myself.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

2. At times I think I am no good at all.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

3. I feel that I have a number of good qualities.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

4. I am able to do things as well as most other people.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

5. I feel I do not have much to be proud of.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

6. I certainly feel useless at times.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

7. I feel that I am a person of worth, at least on an equal plane with others.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

8. I wish I could have more respect for myself.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

9. All in all, I am inclined to feel that I am a failure.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

10. I take a positive attitude toward myself.

1	2	3	4
strongly agree	agree	disagree	strongly disagree

Appendix F

Self-Concept Clarity Scale

SCCS

Please decide whether you agree or disagree with each
statement below. Indicate the extent to which you agree or
disagree by circling the appropriate number on the scale.

1.   My beliefs about myself often conflict with one
     another.

     1   2   3   4   5
     strongly   disagree   neither   agree   strongly
     disagree   agree nor   agree
                                disagree

2.   On one day I might have one opinion of myself and on
     another day I might have a different opinion.

     1   2   3   4   5
     strongly   disagree   neither   agree   strongly
     disagree   agree nor   agree
                                disagree

·3.   If I were asked to describe my personality, my
     description might end up being different from one day
     to another day.

     1   2   3   4   5
     strongly   disagree   neither   agree   strongly
     disagree   agree nor   agree
                                disagree

4.   My beliefs about myself seem to change very
     frequently.

     1   2   3   4   5
     strongly   disagree   neither   agree   strongly
     disagree   agree nor   agree
                                disagree

5.   When I think about the kind of person I have been in
     the past, I'm not sure what I was really like.
     1   2   3   4   5
     strongly   disagree   neither   agree   strongly
     disagree   agree nor   agree
                                disagree

6.   Sometimes I feel that I am not really the person that
     I appear to be.
     1   2   3   4   5
     strongly   disagree   neither   agree   strongly
     disagree   agree nor   agree
                                disagree

7. I seldom experience conflict between the different aspects of my personality.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

8. Sometimes I think I know other people better than I know myself.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

9. I spend a lot of time wondering about what kind of person I really am.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

10. Even if I wanted to, I don't think I could tell someone what I am really like.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

11. In general, I have a clear sense of who I am and what I am.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

12. It is often hard for me to make up my mind about things because I don't really know what I want.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

Appendix G

Instructions for the Self-Description Latency Task

Instructions

In this part of the study, the questions will be presented on the computer screen and you will be asked to indicate your responses by using the computer keyboard. For each question, you will b e asked to answer "YES" or "NO". To give your answer you will be using the "YES" key (e.g., green key) and the "NO" key (e.g., red key) on the computer key board. Please take a moment to familiarise yourself with the "YES" and "NO" keys.

On this questionnaire you will be presented with words that can be used to describe one's character or personality. The words will be presented one at a time on the computer screen. If the word presented is somewhat or mostly characteristic of you, press the "YES" key. If the word is somewhat or mostly uncharacteristic of you, press the "NO" key. Simply give the first answer that comes to your mind and be sure to provide an answer for each word presented. After you give your answer, you will be presented with the next word.

Appendix H

Practice Items and Self-Description Items on

the Self-Description Latency Questionnaire

Practice Items:

Conscientious
Sincere
Reliable
Jealous
Truthful
Secretive
Adaptable
Conceited
Tactful
Conventional
Helpful

Timed Self-Description Items:

Generous
Competitive
Open-minded
Lazy
Sensitive
Honest
Aggressive
Positive
Curious
Dissatisfied
Introverted
Responsible
Humorous
Disorganized
Intelligent
Spontaneous
Creative
Procrastinator
Confident
Laid-back
Moody
Hard-working
Insecure
Organized
Energetic
Shy
Goal-oriented
Mature
Outgoing
Understanding
Friendly
Caring
Stubborn

Appendix I

Positive and Negative Affect Adjectives Included

on the Affect Measure

Positive Affect Adjectives

Delighted
Aroused
Refreshed
Enthusiastic
Active
At rest
Good
Strong
Happy
Excited
Peppy
Calm
Warm-hearted
Satisfied
Pleased
Relaxed
Content

Negative Affect Adjectives

Sad
Fearful
Drowsy
Unhappy
Lonely
Grouchy
Sorry
Uneasy
Hostile
Sleepy
Discouraged
Distressed
Surprised
Nervous
Anxious
Miserable
Quiet
Motionless

Appendix J

Instructions for the Affect Measure

Instructions

In this study, you will be asked to answer some
questions about your present feelings. The questions will
be presented on the computer screen and you will be asked
to indicate your responses by using the computer keyboard.
You will be asked to indicate your answer by pressing a
number on the computer keyboard. Before going on to the
questionnaire, we would like you to become more familiar
with the computer and to have some practice using the
keyboard. For this reason, you will first be asked to
complete a practice questionnaire before going on to the
questionnaire of major interest. Please note that all of
your responses are confidential.

For Practice Trials

For practice purposes you will be asked questions
about recent weather conditions. The purpose of this is to
have you become more familiar with the computer. Although
it is just for practice, please be sure to read each item
and answer as best you can. You will be presented with
sentences that may describe characteristics of the weather.
You will be presented with one sentence at a time. Below
each sentence will be a scale like this one.

1	2	3	4	5	6	7	8	9
not at all		a little bit		moderately		quite a bit		extremely

Please indicate the degree to which today's weather fits
the characteristic by typing in one of the numbers from the

scale.

For Affect Measure:

This questionnaire concerns emotions or feelings. For each question, please indicate how you are feeling <u>right now, that is, at the present moment</u>. You will be presented with statements that describe feelings or emotions. You will be presented with one statement at a time. Below each statement will be a scale like this one:

```
 1         2         3         4         5         6         7         8         9
not at all    a little bit   moderately    quite a bit    extremely
```

Please rate how you are feeling <u>at this very moment</u>. You can provide your answer by typing in one of the numbers from the scale.

Appendix K

Items Included on the Practice Trials of the

Affect Measure

Practice Items:

Sunny
Snowing
Foggy
Hot
Cloudy
Bright
Windy
Warmer than usual
Cold

Appendix L

Attitude-Certainty Questionnaire

ACQ

Please decide whether you agree or disagree with each
statement below. Indicate the extent to which you agree or
disagree by circling the appropriate number on the scale.
Please answer in terms of how you feel right now, at this
time.

1.   My beliefs about the importance of universal health
 ·   care seem to change.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

2.   My opinion on whether all adults should have the right
      to own a gun is very certain.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

3.   I am unclear about whether terminally ill people
      should have the right to end their own lives.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

4.   My opinion of the Montreal Urban Community (MUC)
      police force tends to change.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

5.   I am very certain about my taste in music.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

6.   I am very certain about my attitude towards the death
      penalty.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

7. I may have one opinion about the North American Free Trade Agreement at one time and another opinion at another time.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree ·	strongly agree

8. My beliefs about life after death are in conflict with one another.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

9. I am not sure about my views on abortion.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

10. My attitude toward censorship in the media is not clear.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

11. If I were asked to describe my religious beliefs, my description may change from one time to another.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

12. I would find it difficult to explain my attitude toward pornography because I am not sure what I feel about it.

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

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Appendix M

Trait Valence Rating Scale

1. My first characteristic is...

-4   -3   -2   -1   0   +1   +2   +3   +4
 very   somewhat   neutral   somewhat   very
negative   negative   positive   positive

2. My second characteristic is...

-4   -3   -2   -1   0   +1   +2   +3   +4
 very   somewhat   neutral   somewhat   very
negative   negative   positive   positive

3. My third characteristic is...

-4   -3   -2   -1   0   +1   +2   +3   +4
 very   somewhat   neutral   somewhat   very
negative   negative   positive   positive

Appendix N

Introduction Supplied to Subjects for the

Supposed First Study

Introduction

In this study, we are interested in how younger and older adults describe different aspects of their environment and themselves. Most previous research has addressed how younger and older adults describe their external environment, such as colors, shapes, sounds, and textures. Much less is, however, known about how younger and older people differ in their descriptions of their internal experiences such as their feelings, thoughts, characteristics and opinions. In this study, we are particularly interested in how age influences a person's description of these types of experiences.

In exploring age differences in descriptions, it is important to take into account how people give their descriptions. Some research has found that during a face-to-face interview, older as compared to younger individuals tend to give different types of descriptions. For example, older individuals tend to describe their leisure activities in terms of their benefits for health. In contrast, when people write down descriptions of themselves, older and younger individuals give answers that are more similar. Clearly, it seems to matter whether people are interviewed or asked to write down their descriptions. One obvious difference between face-to-face interviews and written descriptions is that during an interview people share their answers directly with another person, while when they give

their answers in writing they do not. Yet research has not addressed the specific differences that may occur, for what topics, and to what extent.

As mentioned above, one goal of the present study is to examine the nature of age differences in people's descriptions. In addition, the study will examine differences between answers given during an interview and those given in written form.

In this study, one group of participants will complete some written descriptions and questionnaires. You have been randomly assigned to this group. So you will be writing down your descriptions of your thoughts and feelings and completing questionnaires. Another group of participants will be asked different types of questions during a 30 minute interview. An equal number of younger and older adults have been randomly assigned to each group. This will help us to better understand age differences. Finally, please note that all of your responses are confidential.

Appendix O

List of The Beatles' Songs

Played During the Distraction Period

Song List

We can work it out

Norwegian wood (this bird has flown)

Day tripper

With a little help from my friends

A hard day's night

And I love her

You've got to hide your love away

Help!

Appendix P

Introduction Supplied to Subjects for the

Supposed Second Study

Introduction

The purpose of this study is to establish a better understanding of the attitudes, opinions, and thoughts of Canadian university students. To accomplish this goal, we are asking a large number of students at Concordia to complete questionnaires about their attitudes, opinions, and feelings regarding different issues. The study will also provide information on the nature of the questions being asked and will allow us to modify and make refinements to the questionnaires.

Appendix Q

Source Tables (A to F) for All Analyses Conducted

for the Original Sample in Study 1

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) X 2 (Time) Between-

Within ANOVA on Self-Concept Clarity Scores for the Original Sample in Study 1

Between-Subjects Effects

Source	SS	DF	MS	F	p
Within Cells	2499.17	66	37.87	—	—
Clarity	16097.68	1	16097.68	425.12	.0001
Reflection	4.74	1	4.74	.13	.73
Gender	64.85	1	64.85	1.71	.19
Clarity X Reflection	10.35	1	10.35	.27	.60
Clarity X Gender	54.54	1	54.54	1.44	.24
Reflection X Gender	5.42	1	5.42	.14	.71
Clarity X Reflection X Gender	9.21	1	9.21	.24	.62

Source Table A (Continued)

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) X 2 (Time) Between-

Within ANOVA on Self-Concept Clarity Scores for the Original Sample in Study 1

Within-Subject Effects (Time: Pre vs. Post Reflection and Distraction)

Source	SS	DF	MS	F	p
Within Cells	953.65	66	14.45	-	-
Time	23.41	1	23.41	1.62	.21
Clarity X Time	130.11	1	130.11	9.00	.01
Reflection X Time	14.88	1	14.88	1.03	.31
Gender X Time	36.83	1	36.83	2.55	.12
Clarity X Reflection X Time	.13	1	.13	.01	.93
Clarity X Gender X Time	1.40	1	1.40	.10	.76
Reflection X Gender X Time	21.61	1	1.50	1.50	.23
Clarity X Reflection X Gender X Time	15.27	1	15.27	1.06	.31

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Source Table B

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) Between-Subjects ANOVA

on Self-Esteem Scores for the Original Sample in Study 1

Source	SS	DF	MS	F	p
Main Effects	1074.10	3	358.03	15.08	.0001
Clarity	1068.96	1	1068.96	45.04	.0001
Reflection	8.30	1	8.30	.35	.56
Gender	1.90	1	1.90	.08	.78
2-Way Interactions	11.57	3	3.85	.16	.92
Clarity X Reflection	.69	1	.69	.03	.86
Clarity X Gender	10.52	1	10.52	.44	.51
Reflection X Gender	.07	1	.07	.03	.96
3-Way Interactions	7.27	1	7.27	.31	.58
Clarity X Reflection X Gender	7.27	1	7.27	.31	.58
Explained	1105.20	7	157.88	6.65	.0001
Residual	1566.30	66	23.73		
Total	2671.51	73	36.60		

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Source Table C

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) Between-Subjects ANOVA on Trait Valence Scores for the Original Sample in Study 1

Source	SS	DF	MS	F	p
Main Effects	275.55	3	91.85	3.79	.02
Clarity	273.36	1	273.36	11.29	.001
Reflection	2.24	1	2.24	.09	.76
Gender	.92	1	.92	.04	.85
2-Way Interactions	67.88	3	22.63	.93	.43
Clarity X Reflection	40.87	1	40.87	1.69	.19
Clarity X Gender	12.91	1	12.91	.53	.47
Reflection X Gender	12.07	1	12.07	.49	.48
3-Way Interactions	7.03	1	7.03	.29	.59
Clarity X Reflection X Gender	7.03	1	7.03	.29	.59
Explained	363.89	7	51.98	2.15	.051
Residual	1598.27	66	24.22		
Total	1962.16	73	26.88		

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Source Table D

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) Between-Subjects ANOVA on Self-Description Latency Scores for the Original Sample in Study 1

Source	SS	DF	MS	F	p
Main Effects	1974909	3	658303.1	2.13	.17
Clarity	1533	1	1533.4	.01	.94
Reflection	102361	1	102361.0	.33	.57
Gender	1818818	1	1818817.8	5.88	.02
2-Way Interactions	366376	3	122125.33	.39	.76
Clarity X Reflection	615	1	614.9	.01	.96
Clarity X Gender	2061	1	2061.4	.01	.93
Reflection X Gender	361749	1	361749.2	1.20	.28
3-Way Interactions	1103686	1	1103686.3	3.57	.063
Clarity X Reflection X Gender	1103686	1	1103686.3	3.57	.063
Explained	3535792	7	505113.1	1.63	.141
Residual	20405058	66	309167.5		
Total	23940849	73	327956.8		

Source Table E

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) Between-Subjects ANOVA on Attitude Certainty Scores for the Original Sample in Study 1

Source	SS	DF	MS	F	p
Main Effects	582.06	3	194.02	5.16	.01
Clarity	283.30	1	283.30	7.53	.01
Reflection	224.89	1	224.89	5.97	.02
Gender	64.54	1	64.54	1.72	.19
2-Way Interactions	20.56	3	6.85	.18	.91
Clarity X Reflection	.79	1	.79	.02	.88
Clarity X Gender	16.25	1	1ˉ 25	.43	.51
Reflection X Gender	2.57	1	2.57	.06	.79
3-Way Interactions	.01	1	.01	.00	.94
Clarity X Reflection X Gender	.01	1	.01	.00	.94
Explained	602.83	7	86.12	2.30	.038
Residual	2445.61	65	37.62		
Total	3048.44	72	42.34		

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Source Table F

The 2 (Chronic Clarity) X 2 (Reflection condition) X 2 (gender) X 2 (Time) Between-

Within MANOVA on Positive and Negative Affect Scores for the Original Sample in Study

1

Between-Subjects Effects

Source	SS	DF	MS	F	p
Within Cells	203.38	66	3.08	-	-
Clarity	14.64	1	14.64	4.75	.04
Reflection	.00	1	.00	.00	.99
Gender	.98	1	.98	.32	.57
Clarity X Reflection	7.88	1	7.88	2.56	.12
Clarity X Gender	.63	1	.63	.21	.65
Reflection X Gender	5.88	1	5.88	1.19	.17
Clarity X Reflection X Gender	4.32	1	9.32	1.40	.24

Source Table F (Continued)

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) X 2 (Time) Between-Within MANOVA on Positive and Negative Affect Scores for the Original Sample in Study 1

Within-Subject Effects (Type: Positive vs. Negative affect)

Source	SS	DF	MS	F	p
Within Cells	350.50	66	5.31	-	-
Type	1074.01	1	1074.01	202.24	.0001
Clarity X Type	55.93	1	55.93	10.53	.002
Reflection X Type	.24	1	.24	.05	.83
Gender X Type	1.27	1	1.27	.24	.63
Clarity X Reflection X Type	10.08	1	10.08	1.9	.17
Clarity X Gender X Type	.88	1	.88	.17	.69
Reflection X Gender X Type	5.40	1	5.40	1.01	.32
Clarity X Reflection X Gender X Type	1.83	1	1.83	.34	.56

Source Table F (Continued)

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) X 2 (Time) Between-
Within MANOVA on Positive and Negative Affect Scores for the Original Sample in Study
1

Within-Subject Effects (Time: Pre vs. Post Reflection and Distraction)

Source	SS	DF	MS	F	p
Within Cells	14.73	66	.22	-	-
Time	.16	1	.16	.70	.41
Clarity X Time	.12	1	.12	.55	.46
Reflection X Time	.04	1	.04	.16	.68
Gender X Time	.58	1	.58	2.60	.11
Clarity X Reflection X Time	.10	1	.10	.47	.49
Clarity X Gender X Time	.18	1	.18	.80	.37
Reflection X Gender X Time	.32	1	.32	1.45	.24
Clarity X Reflection X Gender X Time	.69	1	.69	3.10	.09

Source Table F (Continued)

The 2 (Chronic Clarity) X 2 (Reflection Condition) X 2 (gender) X 2 (Time) Between-
Within MANOVA on Positive and Negative Affect Scores for the Original Sample in Study
1

Within-Subject Interaction Effects (Time X Type)

Source	SS	DF	MS	F	p
Within Cells	22.01	66	.33		
Type X Time	.01	1	.01	.03	.86
Clarity X Type X Time	.13	1	.13	.39	.54
Reflection X Type X Time	.04	1	.04	.13	.72
Gender X Type X Time	.26	1	.26	.78	.38
Clarity X Reflection X Type X Time	.03	1	.03	.09	.77
Clarity X Gender X Type X Time	.04	1	.04	.11	.74
Reflection X Gender X Type X Time	.27	1	.27	.81	.37
Clarity X Reflection X Gender X Type X Time	.19	1	.19	.57	.45

Appendix R

Trait-Reflection Frequency Questionnaire

People may use different words to describe themselves. For example a person may say that he or she is shy or sociable, lazy or hard-working. Please take a moment to think of a word that describes your personality (please think of one now).

Listed below are some questions that people may ask themselves when they think about their personality characteristics. Please read each question and decide how often you have asked yourself these questions (or very similar ones) about the characteristic that you have just selected above. For each question, circle the number on the scale that best represents how frequently you have asked yourself such a question in the past.

(1)   Why do I have this characteristic?

1	2	3	4	5
almost never ask myself	occasionally ask myself	sometimes ask myself	often ask myself	almost always ask myself

(2)   In what ways might people notice this about me?

1	2	3	4	5
almost never ask myself	occasionally ask myself	sometimes ask myself	often ask myself	almost always ask myself

(3)   What does it mean to me to have this characteristic?

1	2	3	4	5
almost never ask myself	occasionally ask myself	sometimes ask myself	often ask myself	almost always ask myself

(4)　In what ways is this characteristic important or not
　　　important to me?

1	2	3	4	5
almost never ask myself	occasionally ask myself	sometimes ask myself	often ask myself	almost always ask myself

(5)　Why do I see myself this way?

1	2	3	4	5
almost never ask myself	occasionally ask myself	sometimes ask myself	often ask myself	almost always ask myself

(6)　How does this characteristic relate to other
　　　characteristics that I have?

1	2	3	4	5
almost never ask myself	occasionally ask myself	sometimes ask myself	often ask myself	almost always ask myself

Appendix S

Private Self-Consciousness Scale

In this questionnaire, we are interested in finding out how you feel about yourself. Please think about how much each statement is characteristic of you or is not characteristic of you. Each statement is followed by a scale. To indicate your response, circle the number on the scale that best represents how the statement relates to how you are. Rate a statement as characteristic of you if you feel it describes what you typically do, or how you typically think or feel. Please indicate your answer for each statement.

1. I'm always trying to figure myself out.

```
0               1               2               3               4
extremely                                               extremely
uncharacteristic                                        characteristic
```

2. Generally, I'm not very aware of myself.

```
0               1               2               3               4
extremely                                               extremely
uncharacteristic                                        characteristic
```

3. I reflect about myself a lot.

```
0               1               2               3               4
extremely                                               extremely
uncharacteristic                                        characteristic
```

4. I'm often the subject of my own fantasies.

```
0               1               2               3               4
extremely                                               extremely
uncharacteristic                                        characteristic
```

5. I never scrutinize myself.

```
0               1               2               3               4
extremely                                               extremely
uncharacteristic                                        characteristic
```

6. I'm generally attentive to my inner feelings.

```
0               1               2               3               4
extremely                                               extremely
uncharacteristic                                        characteristic
```

7. I'm constantly examining my motives.

```
0                1                2                3                4
extremely                                                 extremely
uncharacteristic                                          characteristic
```

8. I sometimes have the feeling that I'm off somewhere
    watching myself.

```
0                1                2                3                4
extremely                                                 extremely
uncharacteristic                                          characteristic
```

9. I'm alert to changes in my mood.

```
0                1                2                3                4
extremely                                                 extremely
uncharacteristic                                          characteristic
```

10. I'm aware of the way my mind works when I work through
    a problem.

```
0                1                2                3                4
extremely                                                 extremely
uncharacteristic                                          characteristic
```