

THE CONSTRUCTION OF A SCALE THAT MEASURES
THE FUNCTIONS OF IDENTITY

A Thesis

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of

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by

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ABSTRACT

THE CONSTRUCTION OF A SCALE THAT MEASURES THE FUNCTIONS OF IDENTITY

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This thesis is the construction of a reliable indicator of the five functions of identity proposed by Adams and Marshall (1996). Following Loevinger's (1957) method of test construction, two related studies were completed to test the substantive, structural and external validity of the "Functions of Identity Scale." Study 1 provided support for the substantive validity (factor analysis, internal consistency and construct validity). Results of Study 2 revealed evidence for four functions of identity. Study 2 offers support for the external validity of the scale. As predicted, the higher the identity status (diffusion to achievement), the stronger the relationship with the functions of identity, except for the "harmonious goals" function. These findings also support the conceptualization of the process of identity formation based on the distinctions of active and passive identity. Passive identity (diffusion + foreclosure) was associated with lower scores on the Functions Scale than was active identity (moratorium + achievement).

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Introduction

Erik H. Erikson (1968) has been most influential in providing a theoretical framework for the measurement of identity formation. He recognized identity formation as the central task of adolescence and early adulthood whereby the individual makes the transition from childhood to adulthood. Erikson's (1968) fifth stage of psychosocial development, identity versus role confusion, is marked, as are the stages before and after it, by a "crisis" which Erikson defines as "a necessary turning point, a crucial moment, when development must move one way or another, marshaling resources of growth, recovery, and further differentiation" (p 16). The normative crisis of adolescence is determined, in part, by the crises that came before it, and determines, to a large degree, those which follow it. Each stage in the life cycle can be either successfully or unsuccessfully resolved, with successful resolution facilitating further successful resolutions contributing to healthy personality development.

An optimal sense of identity is reached with the successful resolution of Erikson's (1968) fifth psychosocial stage of development, whereby the adolescent acquires a sense of "being at home in one's body, a sense of 'knowing where one is going,' and an inner assuredness of anticipated recognition from those who count" (p.165). During this stage, the adolescent braves internal and social conflicts and emerges "from each crisis with an increased sense of inner unity, with an increase of good judgement, and an increase in the capacity to 'do well' according to his [or her] own standards and to the standards of those who are significant to him [or her]" (p. 91). Healthy identity development, according to

Erikson (1968), involves active mastery of one's environment as well as a sense of self-certainty that is met by some sort of societal recognition.

Erikson (1968) writes that all societies offer "more or less sanctioned intermediary periods between childhood and adulthood" (p. 156) during which time the process of identity formation is undertaken. He refers to this "*psychosocial moratorium*" (p. 156) as a period of time during which the adolescent and young adult, "through free role experimentation, may find a niche in some section of his [or her] society, a niche which is firmly defined and yet seems to be uniquely made for him [or her]" (p. 156).

In his operationalization of Erikson's identity stage, James Marcia (1966) has drawn upon two dimensions of Erikson's theory of identity formation, crisis (exploration) and commitment. Recognize, however, that the nature of identity was construed by Erikson as a broader construct, one too large to be encapsulated in any single operationalization of identity. Based on Marcia's (1966) work, exploration (crisis) refers to an examination of alternatives with the intention to make a commitment. Commitment refers to dedicating oneself to an action, goal, ideal, value, or belief. Based on Erikson's theoretical writings, Marcia (1966) has, both on a conceptual and methodological level, delineated four types of identity, commonly known as the Identity Status Paradigm. The least mature or advanced status is *identity diffusion*, where youth have not made and avoid ideological commitments, nor have they actively explored alternatives. Those who are *identity foreclosed* have made commitments (usually adopting the beliefs and values of their parents), but have not actively explored alternatives for themselves. Adolescents in the *moratorium* phase are actively exploring options and alternatives, but have not yet made any firm commitments. Finally, those youth that are *identity achieved* have

experienced the exploration of the moratorium stage and have made choices (commitment) that best fit their individuality at that time.

These identity statuses can be divided into two categories based on the dimensions of active and passive construction. Adams and Marshall (1996), in their discussion of the nature of selfhood, address the idea of active and passive identity:

Identity is a social-psychological construct that reflects *social influences* through imitation and identification processes and *active self-construction* in the creation of what is important to the self and to others. The active self-constructive aspects of identity are founded upon *cognitive* (or *ego*) *operations* that organize, structure, and construct/reconstruct knowledge of the self (p. 433).

An active identity is based on exploration, self-construction, and experience and is best represented by the *moratorium* and *identity achieved* statuses. A passive identity is based on identification and imitation, and is best represented by the *foreclosed* and *diffused* identity statuses. Passive identity is based on either avoidance of identity decision-making or conformity to external social conventions. Active identity is based on internal construction of self-regulatory psychological systems that direct and guide behaviour. External self-systems are thought to be less mature than internal self-systems.

The Functions of Identity

It is clear from Erikson's (1968) writings that formulating an identity is the central developmental task of adolescence and sets the groundwork for the structure of the developmental tasks of later life. What other function does identity serve? In terms of Marcia's (1966) identity statuses, how does identity function differently for individuals who have reached the more sophisticated levels of identity formation (moratorium and

identity achieved) than for those in the less developmentally sophisticated statuses (diffusion and foreclosure)? What does an identity give individuals who engage in active construction versus passive construction of the self?

Adams and Marshall (1996) propose that identity, as a social-psychological structure, has certain properties. It is a “*self-regulatory system* which functions to *direct* attention, *filter* or *process* information, *manage* impressions, and *select* appropriate behaviours” (p.433). Furthermore, as a social-psychological construct, identity also has its own “*functional purpose*” (p. 433). Adams and Marshall (1996) propose five most commonly documented functions of identity. They include:

1. providing the structure for *understanding* who one is
2. providing *meaning and direction* through commitments, values and goals
3. providing a sense of *personal control* and free will
4. providing for *consistency, coherence and harmony* between values, beliefs and commitments
5. providing the ability to *recognize potential* in the form of future possibilities and alternative choices (p. 433)

In a more recent work, Adams and Ethier (1999) present a collection of research findings as evidence for the functions of identity proposed by Adams and Marshall (1996). The first function of identity, according to Adams and Marshall (1996), is to *provide the structure for understanding who one is*. Adams and Ethier (1999) suggest that individuals who are identity achieved would exhibit low levels of anxiety about the self. Lower levels of anxiety could manifest itself in self-consciousness, self-esteem and self-acceptance. For example, Adams, Abraham, and Markstrom (1987) found, in a comparison of the four identity statuses, that achieved individuals were less self-conscious than others, and were the least self-focussed of all the identity statuses. The more sophisticated identity statuses have also been found to be positively correlated with

positive body image and self-image (Bennion, 1988), higher self-esteem and self-acceptance (Owen, 1984), and lower adolescent egocentrism (O'Connor, 1995).

Understanding the self is accompanied by a lower level of anxiety about the self and is related to the more advanced identity statuses and thus, optimal identity development.

The second function of identity is to *provide meaning and direction through commitments, values and goals* (Adams & Marshall, 1996). Identity achieved individuals have been found to be more committed than diffused individuals (Adams, Shea, & Fitch, 1979), as well as being more goal-directed and self-motivated (Blustein & Palladino, 1991). Commitment has also been studied by looking at sincerity of relationships and importance of religious values. Archer and Waterman (1988) found that achieved individuals were more deliberate in their approach to romantic relationships, as well as more open to sharing information of a personal nature with their partner. Markstrom-Adams, Hofstra and Dougher (1994) found that Mormons who attended church on a weekly basis were more likely to be identity achieved. Individuals who have achieved an identity appear more committed and goal-oriented than non-commitment identity status persons.

The third function of identity, as proposed by Adams and Marshall (1996), is to *provide a sense of personal control and free will*. Adams and Ethier (1999) relate the ideas of personal control and free will to the constructs of locus of control, conformity, and shyness. It has been found that adolescents who are identity achieved show the least amount of external locus-of-control, suggesting that they have greater confidence in their own personal control over their lives (Abraham, 1983; Francis, 1981; Bennion, 1988). This same body of research has also found that identity diffused individuals show the

most amount of external locus of control. Adams, Ryan, Hoffman, Dobson, and Nielsen (1985) have also shown that diffused individuals were more likely than achieved individuals to conform to peer pressure. Similarly, using substance abuse as an indicator of personal control and possibly conformity, Adams and Ethier (1999) present a body of research indicating that individuals in the less advanced identity statuses are more likely than achieved individuals to show signs of substance abuse and greater beer consumption (Jones, Hartmann, Grochowski, & Glider, 1989; Bishop, Macy-Lewis, Schnekloth, Puswella and Strussel, 1997).

Based on the work of Buss (1980) and Leary (1983), Adams and Ethier (1999) describe shyness as “a problem involving anxious self-preoccupation and behavioral inhibition in the presence of others due to the prospect of the threat of being evaluated” (p. 39). As expected, shyness has not been found to be associated with the identity achieved status (Hamer, & Bruch, 1994). Alternatively, Clancy and Dollinger (1993) found identity achieved individuals to have high levels of conscientiousness. A conscientious person, as described by Costa and McCrae (1985), is one who strives to achieve his or her goals, is motivated by tasks to be accomplished, and is organized and planful. Adams and Ethier (1999) write that the opposite of conscientiousness would likely be a person who is more spontaneous and self-indulgent (diffused), thus lacking the personal control associated with the highly conscientious person (identity achieved). These research findings on locus of control, conformity, and shyness provide initial support for the proposition that identity functions to provide individuals with a sense of personal control and free will.

Adams and Marshall's (1996) fourth function of identity is *to provide consistency, coherence and harmony between values, beliefs and commitments*. Adams and Ethier (1999) cite academic adjustment, defense mechanisms and intrinsic orientations as support for this function of identity. Research by Carlson (1986) shows that, when comparing overall academic adjustment, identity achieved individuals are significantly more adjusted than diffused individuals. Cramer (1995) found defensive and adaptive narcissism to be related to the identity achieved status. The importance of defense mechanisms, as they relate to the process of identity development, is that they guard against disappointments and potential loss of self-esteem; adaptive narcissism is associated with the development of healthy self-esteem and ego-ideals. Finally, Fulton (1997) found that achieved individuals have high intrinsic and low extrinsic social orientation. This is significant in that individuals who have an intrinsic internalized religion pursue it as an end in itself, rather than as a means toward social advantage. These studies suggest that individuals who have achieved an identity have higher academic adjustment and are more likely to use healthier and adaptive defense mechanisms to maintain consistency and coherence between their values, beliefs and commitments.

The fifth and final function of identity proposed by Adams and Marshall (1996) is *to provide the ability to recognize potential in the form of future possibilities and alternative choices*. Academic achievement, as measured by grade point average (GPA), and career planning for the future are two of the significant areas where adolescents may find recognition of their potential (Adams & Ethier, 1999). Individuals who are identity achieved have higher GPA scores as well as a greater desire to continue their education

than do diffused individuals (Francis, 1981). Similarly, advanced identity status individuals show greater career planning and decidedness (Wallace-Brosious, Serafical, & Osipow, 1994). Finally, adolescents who have achieved an identity are more likely to believe that facets of work represent a feasible method of fulfilling their future aspirations than identity diffused adolescents. This body of research suggests that individuals who have an advanced identity development are more likely to be invested in endeavours that recognize their potential, such as academic success and career planning for the future.

The research in the area of identity formation suggests that healthy identity achievement in the form of active self-construction is associated with certain characteristics that are not associated with the passive forms of identity development. Adams and Marshall (1996) have proposed that identity has its own function or purpose and that these functions are what distinguish the advanced identity statuses (achieved and moratorium) from the less advanced statuses (diffusion and foreclosure). In effect, the functions themselves can be viewed as part of what Erikson (1968) calls “an optimal sense of identity” (p. 165).

Research Objective

Eriksonian scholars have focused on measuring identity (Marcia, 1966; Grotevant & Adams, 1984; Bennion & Adams, 1986; Berzonsky, 1989), but have failed to measure its functions. While Adams and Ethier (1999) have presented a body of research to support the basic functions of identity, the functions themselves have not been measured directly. The purpose of this research project is to construct a reliable indicator of the

functions of identity proposed by Adams and Marshall (1996). Following Loevinger's (1957) method of test construction, two studies were completed in order to establish the substantive, structural and external validity of the new scale.

Loevinger (1957) describes the construct validity of a psychological measure as having three components: the substantive component, the structural component, and the external component. She describes these three aspects of validity as, "mutually exclusive, exhaustive of the possible lines of evidence for construct validity, and mandatory" (pp. 653-654). Loevinger also argues that these three components of validity are closely related to the process of scale construction: developing a pool of items, analyzing the internal structure of the item pool and selecting items to form a scoring key, and correlating test scores with comparison variables as well as non-comparison variables.

The substantive component of test construction is slightly different from what is commonly referred to as content validity, "the considerations of content alone are not sufficient to establish validity even when the test content resembles the trait, and considerations of content cannot be excluded when the test content least resembles the trait" (p. 657). Substantive validity is "the ability of theory to account for the resultant content" (p. 661). The construction or collection of a pool of items is the first step in test construction and is necessary in order to determine whether evidence that supports the validity of the test also supports the validity of the construct.

The structural component of validity is described as "the extent to which structural relations between test items parallel the structural relations of other manifestations of the trait being measured" (p. 661). This includes both the fidelity of the

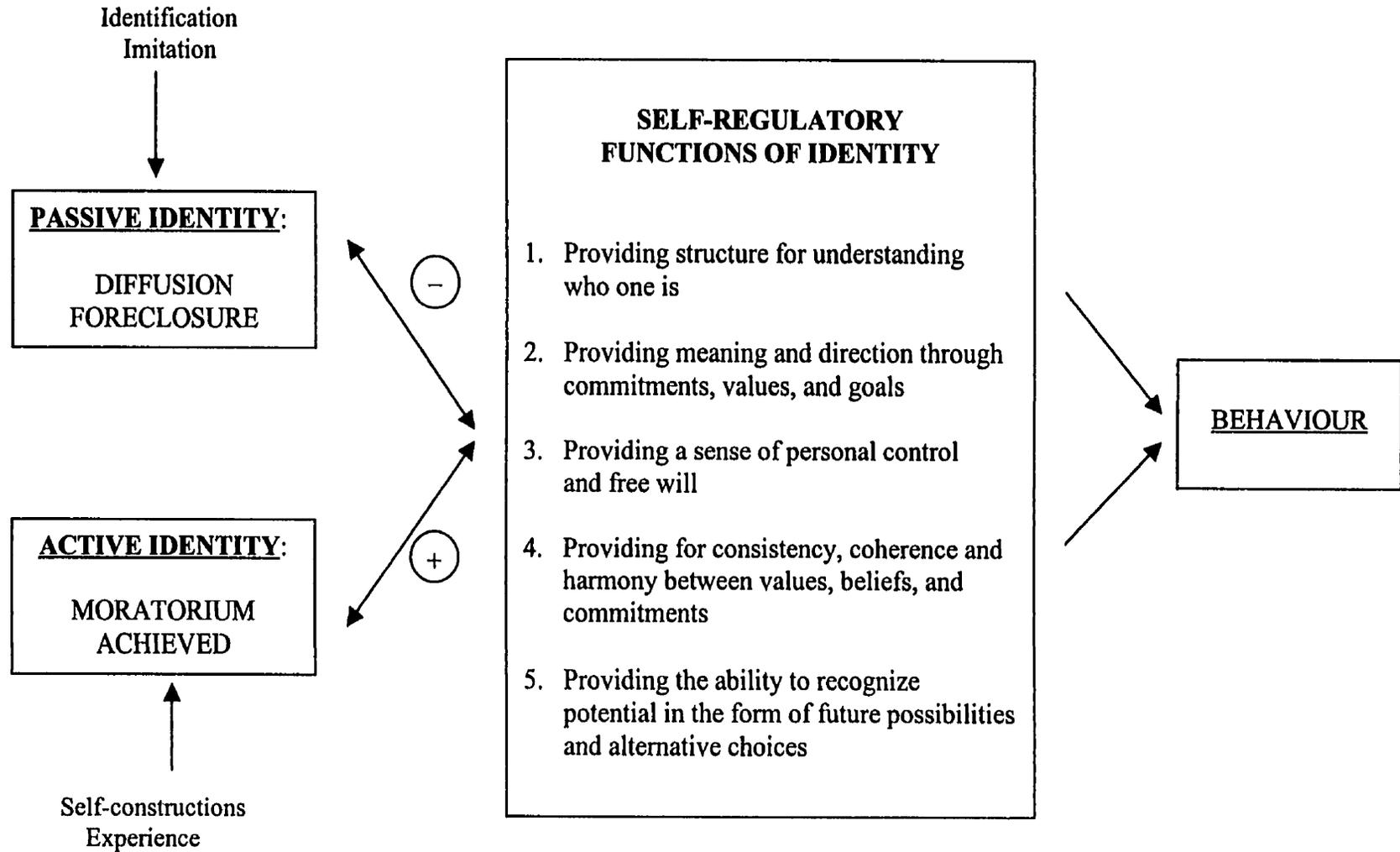
structural model and inter-item structure. The structural model chosen here is a quantitative one in which the “number of manifestations is an index of the amount of that trait” (p. 664). The degree of structure may be ascertained by administering the original item pool to a normative sample, selecting the items that best fit with the chosen structural model, and then administering the test to a new sample to test the hypothesis of structural coherence.

Finally, the external component of validity includes what are known as concurrent, predictive and discriminant validity. Loevinger (1957) also refers to the importance of comparison to other test scores to determine the validity of the new measure. Making use of the validity of other test scores in relation to the new test is one aspect of the external validity component. Factorial patterning, and the use of comparison measures with which the test is expected to show a relationship are also part of the process of establishing the external validity component of a psychological measure.

Conceptual Framework

The conceptual framework of this research project lends itself to certain ideas about the relationship between identity statuses and the functions of identity (see Figure 1). Identity can be conceptualized as active or passive, based on internal or external self-systems. Active self-construction, based on internal self-systems, is most representative of Erikson’s (1968) optimal identity. The functions of identity represent the self-regulatory functions that result when youth actively engage in the process of identity development. Given this conceptual framework, the active identity category, consisting

Figure 1: Conceptual framework depicting the proposed relationship between the active and passive identity categories and the functions of identity (Adams & Marshall, 1996).



of moratorium and achievement, is expected to be positively related to the functions of identity. Similarly, the passive identity category that is comprised of the diffused and foreclosed identity statuses is expected to be negatively related to the functions of identity, as the functions are based on a more active construction of the self. It would follow from this that the functions of identity would manifest themselves in certain behaviours, such as academic commitments, career choices, political activism, or relationship choices and development.

Study 1: Development of the Instrument and Substantive and Structural Validity

The objective of the first study was to determine the content area to be covered by the instrument and to maximize the appropriateness of each item, following Loevinger's (1957) first two phases of test construction – establishing substantive and structural validity. This process involved creating a pool of items that represent the five functions of identity and administering this item pool to a sample group in order to establish the structural validity of the scale via statistical analyses.

The initial step in developing the item pool was to construct a working definition for each function of identity (Clark & Watson, 1995). Each definition is grounded in Eriksonian writing (Erikson, 1968) in order to ensure that the conceptualization of the functions is consistent with Erikson's theory of identity development and the achievement of an "optimal" identity (see Table 1). The item pool was then constructed based on the statement of the function, as proposed by Adams and Marshall (1996), the corresponding definition, and research presented by Adams and Ethier (1999) in support of the five functions of identity.

Table 1

The Functions of Identity and Corresponding Definitions.

Functions of Identity	Definition
<p>1. To provide the structure for understanding who one is</p>	<p>Identity provides an awareness of the self as an independent and unique individual. It is most apparent when it is about to transform or change, where change is accompanied by extreme identity consciousness. A sense of understanding who one is provides the structure for a) self-certainty and self-esteem and b) a foundation for an emerging and unfolding self.</p>
<p>2. To provide meaning and direction through commitments, values and goals</p>	<p>Identity is based on the capacity for faith that commitments or chosen values or goals will receive institutional confirmation. The commitments or goals of identity direct or channel behaviours and actions.</p>

Table 1 continued

3. To provide a sense of personal control and free will

Identity is based on the distinctions between passivity or compliance and an active or willful nature. Passive forms of identity are based on compliance, imitation and identification. Active forms of identity are based on self-expression, independent construction, and a sense of free will and autonomy.

4. To provide consistency, coherence and harmony between values, beliefs and commitments

Identity formation is based on the organizing agency of synthesis or integration at one point and across time. Identity in its best state offers a sense of coherence between values, beliefs and commitments. This sense of coherence is accompanied with harmony or low anxiety and a sense of peace with one's self.

5. To provide the ability to recognize potential in the form of future possibilities and alternative choices.

A sense of identity is, in part, based on self-initiative and on a sense of purpose that offers the promise of fulfilling one's range of capacities. Thus, self-initiative, purpose, and capacities offer the promise of a tangible future.

Method

Participants

The sample consisted of 332 undergraduate students from five 100, 200, and 300 level courses in the Department of Family Relations and Applied Nutrition at the University of Guelph. Participants ranged in age from 18 to over 25 years, with 80% of the sample ($N = 266$) ranging from 20 to 23 years ($M = 2.35$, where 2 = 20 to 21 years and 3 = 22 to 23 years). The sample was predominantly female ($N = 313$). Participants from two classes received course credit for their participation in the study. Those from other classes participated on a strictly voluntary basis.

Item Pool

An initial item pool of 64 items was created to measure the five functions of identity and was thus conceptually divided into five subscales in order to determine whether five separate functions exist. The creation of each item in the initial item pool was based on the statement of the function, as proposed by Adams and Marshall (1996), and the definition of the function that was created based on Eriksonian writing (Erikson, 1968). The goal here was to base the construction of the items on an articulated theory (or what Cronbach and Meehl term the “nomological net” (Cronbach & Meehl, 1955, p. 66)). The initial items in the pool were chosen to represent a wide content area that is potentially relevant to the functions of identity and the theory of identity development (Loevinger, 1957; Clark & Watson, 1995). Close attention was paid to the “basic principles of item writing,” as outlined by Clark and Watson (1995, p. 312). This included a focus on simple,

straightforward language, exact phrasing of items, and the avoidance of “double-barreled items” (p. 312) that might assess more than one characteristic or construct. The initial pool of items was reviewed by a leading researcher in the area of identity development, the primary researcher who proposed the five functions of identity, to ensure conceptual compatibility. The revised item pool was then reviewed by another researcher whose area of expertise was not identity development, in order to help simplify the vocabulary, refine the statements and eliminate any statements that appeared to be confusing, “double-barreled,” or conceptually mis-stated. Revisions were made accordingly and a final item pool consisting of 60 items was confirmed. The number of items created per function ranged from 11 to 16, adding to a total of 60 items (see Table 2).

Table 2

Original Item Pool for the Functions of Identity Scale (Study 1)

Functions of Identity	Items
<p><u>Function 1:</u></p> <p>To provide the structure for understanding who one is</p>	<ol style="list-style-type: none"> 1. I have a clear awareness of myself as a unique individual. 2. I am conscious of growing and evolving into the person that I want to be. 3. I don't really understand my "self." 4. I am certain about my self, being, in part, independent of others. 5. My sense of self is continually unfolding but the core (foundation) remains mostly the same. 6. I haven't done much growing "as a person." I am pretty much the same person I was five years ago. 7. I am most conscious of my sense of identity when I must face change. 8. I accept who I am. 9. I am certain that I know myself. 10. I am not comfortable with myself.

Table 2 continued

Function 2:

To provide meaning
and direction through
commitments, values
and goals

1. The values I have developed influence my behaviours.
2. I do not have strong values or goals.
3. I am a goal-directed person.
4. I am not clear about who I am and/or where I am going.
5. I tend to set goals and then work towards making them happen.
6. Self-motivation, based on my sense of self, is one of my strengths.
7. My commitments or chosen values or goals provide meaning in my life.
8. I have a strong sense of direction in my life and the commitments that I make reflect this direction.
9. I believe that my values and goals are congruent with my actions.
10. My values and goals are congruent with the commitments that I make.
11. I feel that my values and goals are socially acceptable.

Table 2 continued

Function 3:

To provide a sense of personal control and free will

1. I believe that my behaviours and actions are a form of self-expression of my identity.
2. I am an independent and autonomous person.
3. I have actively constructed a strong commitment to my values and goals.
4. I seem to passively accept the values and beliefs of others.
5. My sense of free will guides my choices and actions.
6. I do not have clear life goals that I have constructed on my own.
7. I play an active role in constructing my life.
8. While I am influenced by others, I make my own independent decisions.
9. I understand my life as being meaningful through identification with my parent(s)' values.
10. Much of who I am seems to be based on compliance to my parent(s)' wishes.
11. As I build my sense of self, I feel freedom to set my own goals.
12. As I express my sense of who I am, I feel free and autonomous.
13. I do not feel self-reliant.
14. I control my own behaviour and actions.

Table 2 continued

Function 4:

To provide consistency, coherence and harmony between values, beliefs and commitments

- 15. I prefer to comply with normal standards of behaviour than to push the limits of self-expression.
- 16. My sense of who I am is based on self-expression and a feeling of free will.

- 1. My values and beliefs are consistent with the commitments that I make in my life at this time.
- 2. I feel a lot of anxiety about how my values and beliefs play out in my actions and behaviours.
- 3. I feel a sense of peace with my self and my identity.
- 4. I accept that my values and beliefs are coherent with the person that I understand myself to be.
- 5. Who I am is not very close to the person that I want to be.
- 6. My values and beliefs are an accurate reflection of who I am.
- 7. My values and beliefs say a lot about who I am.
- 8. I feel I have a consistent sense of self from one day to the next.
- 9. I think my vision of the ideal self is close to how I am now.
- 10. I believe my values, beliefs and commitments fit together.

11. I know myself well and I feel comfortable with who I am.
12. I feel anxiety and upset over the goals and values I have made commitments toward.

Function 5:

To provide the ability to recognize potential in the form of future possibilities and alternative choices

1. I have the capacity to fulfil that to which my self-initiative and sense of purpose lead me.
2. I do not have a sense of a tangible future ahead of me (e.g. career).
3. I have what it takes to make my future a reality.
4. I am undecided about where I will be in the future.
5. I have no idea what my future holds for me.
6. My potential, derived from my sense of purpose in life, will be recognized in my choices and in my future ahead.
7. My sense of purpose in life will help guide my future.
8. I am who I guide myself to be.
9. The decisions I make today build the promise of my future sense of self.
10. If I initiate things I will find what I am capable of doing.
11. Learning what I am capable of doing provides the basis for deciding what I will become.

Procedure

Approximately 520 questionnaires were distributed to students in five large classes during regular lecture periods. The questionnaire was intended to be self-administered. It consisted of the 60 items intended to measure the functions of identity, as well as three demographic questions concerning age, gender and year of academic study. Regarding the main part of the questionnaire, participants were asked to indicate how well each statement described them by responding on a 5-point Likert scale (1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = always). Scores were summed across items for each individual function yielding five function scores for each participant.

The questionnaire package contained a cover information/consent form that stated the purpose of the study; instructions for completing the study; and a statement indicating that a summary of the findings of the study would be available on a website in July for interested participants. Students were verbally told by the researcher that the study was being conducted to develop an assessment device to be used in research on the assessment of self. They were also informed that their participation was completely voluntary, anonymous and confidential, and were asked to sign and return the consent form with their completed questionnaire package, should they choose to participate. Participants were asked to complete the package out of class and return it to the researcher, either at a designated class time a few days to a week later or via interdepartmental mail. Two classes were provided class time to complete the questionnaire for course credit, if they chose to participate. In those classes, students who did not wish to complete the questionnaire for course credit were offered alternative means by which to gain course credit so that they did not feel obligated or forced to participate in the study.

Results

All data entries were coded so that all the items were scored in the affirmative direction (16 items were reverse scored). A series of factor analyses were performed to eliminate items that did not load together, and to determine whether there were five separate scales. One case was dropped from the analyses, as the respondent did not complete the scale. Missing data were replaced with the mean (12 cases, where 3 scores or less were missing).

Maximum likelihood factor analyses with varimax or oblique rotations obtained similar factors, with a five factor solution being the most salient. All further factorial analyses were computed for five factors. To be considered a factor, the item had to have a loading of .40 or higher on the primary factor and could not have a loading on a secondary factor. Eight items were dropped, four items due to factor loadings of less than .40, and four items due to a secondary loading on another factor. Twelve items with a factor loading of less than .40 were kept for the first factor analysis only, due to their conceptual compatibility with the factors (functions of identity). Item loadings for these factors are reported in Table 3.

Table 3

Factor Loadings For First Factor Analysis (Five-Factor Model) of Items on the First Version of The Functions Of Identity Scale (Study 1)

Item Number	Factor Loadings				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
46	.697				
52	.651				
31	.649				
11	.642				
36	.621				
4	.584				
20	.573				
34	.548				
54	.495		.332		
2	.494				
7	.437				
37	.409				
25	.333				
3	.327				
5	.313				
21		.855			
27		.791			
10		.693			
22		.634			
40		.539			
18		.495			
13		.315			
16		.304			
58			.773		
15			.717		
45			.709		
42			.686		
39			.678		
51			.632		
48			.601		
26			.548		
12			.466		
1			.359		
38				.532	
35				.531	
8				.471	
53				.361	

Table 3 continued

Item Number	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
14				.349	
17				.341	.309
55					.481
43					.463
57				.348	.458
32					.380
30					.377
19					.355
44				.341	.352
59					.348
41					.333
29					.332
33					.321

Another maximum likelihood oblique analysis was performed on the new item list and again revealed that the functions of identity could best be explained by a five factor solution. The five factors were conceptually consistent with the five functions of identity. Table 4 contains the item loadings for these factors.

Table 4

Factor Loadings For Second Factor Analysis (Five-Factor Model) of Items on the First Version of The Functions Of Identity Scale (Study 1)

Item Number	Factor Loadings				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
58	.857				
15	.751				
45	.751				
39	.730				
42	.730				
51	.658				
48	.611				
26	.582				
12	.542				
1	.418				
41	.331				
60	.318				
19	.315				
43	.314				
50	.304				
21		.829			
10		.736			
27		.724			
22		.592			
18		.465			
40		.418			.372
36			.660		
4			.584		
31			.559		
20			.515		
46			.489		
2			.480		
34			.477		
52			.460		
11			.403		
6			.328		
38				.559	
35				.552	
14				.431	
53				.427	
8				.380	
30				.313	

Table 4 continued

Item Number	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
13					.786
24					.747
29					.546
32			.312		.365

In order to create a final version of this scale that was relatively short and easy to administer, the items with the strongest loadings in each factor were kept (3 to 6 items), with the others being dropped from further analyses. Another maximum likelihood, oblique rotation analysis revealed that items within each factor remained stable, except one which was double-loaded (#8) and thus dropped from the new version of the scale. Items and factor loadings for these five factors are reported in Table 5. The result is a 22 item scale containing five subscales that are expected to measure the five functions of identity.

Table 5

Factor Loadings for Items in Final Five Factor Oblique Rotation (Study 1)

Item Number	Content	Factor Loading
Factor 1: Structure		
58.	Learning what I am capable of doing provides the basis for deciding what I will become.	.879
45.	I am certain that I know myself.	.750
39.	I accept who I am.	.713
42.	I feel I have a consistent sense of self from one day to the next.	.709
15.	I feel a sense of peace with my self and my identity.	.693
Factor 2: Future		
21.	I am undecided about where I will be in the future.	.826
27.	I have no idea what my future holds for me.	.775
10.	I do not have a sense of a tangible future ahead of me (e.g. career).	.660
22.	I do not have clear life goals that I have constructed on my own.	.562

Factor 3: Goals

13.	I am a goal-directed person.	.770
24.	I tend to set goals and then work towards making them happen.	.737
29.	Self-motivation, based on my sense of self, is one of my strengths.	.542

Factor 4: Harmony (between values, beliefs and commitments)

31.	My values and beliefs are an accurate reflection of who I am.	.693
36.	My values and beliefs say a lot about who I am.	.686
4.	My values and beliefs are consistent with the commitments that I make in my life at this time.	.609
20.	I accept that my values and beliefs are coherent with the person that I understand myself to be.	.590
46.	I believe that my values and goals are congruent with my actions.	.583

Factor 5: Control		
38.	Much of who I am seems to be based on compliance to my parents' wishes.	.613
35.	I understand my life as being meaningful through identification with my parents' values.	.544
14.	I seem to passively accept the values and beliefs of others.	.459
53.	I prefer to comply to normal standards of behaviour than to push the limits of self-expression.	.409
30.	While I am influenced by others, I make my own independent decisions.	.309

In order to establish the reliability of each of the subscales, the internal consistency for each factor was computed using Cronbach's (1951) alpha. Each factor had a moderate to high internal consistency (control, $\alpha = .590$; goals, $\alpha = .764$; harmony, $\alpha = .803$; future, $\alpha = .828$; and structure, $\alpha = .892$) and inter-item correlations were low to moderate (range = .12 to .70) for each subscale. The internal consistency of the subscales provides initial support for the structural validity of the measure (Loevinger, 1957; Clark & Watson, 1995).

A correlational analysis (see Table 6) between the five functions revealed that they are all significantly correlated with one another, as expected. Since the factor analysis revealed five factors, rather than one large factor, or two or three factors, it is expected that these functions may differ when compared to identity statuses of individuals.

Table 6

Correlations Between Five Functions in Study 1

	Structure	Goals	Control	Harmony	Future
Structure	1.000	.481**	.240**	.558**	.403**
Goals	.481**	1.000	.196**	.410**	.367**
Control	.240**	.196**	1.000	.174**	.195**
Harmony	.558**	.410**	.174**	1.000	.336**
Future	.403**	.367**	.195**	.336**	1.000

** . Correlation is significant at the 0.01 level.

The results of Study 1 show support for the substantive validity component of the scale, as a broad group of items was constructed and included the initial item pool. This group of items was chosen based on judgement that the items were relevant to the broadly defined field of the functions of identity. Final item selection was based on empirical findings from a factor analysis, as recommended by Loevinger (1957). The remaining items were conceptually and theoretically congruent with the functions of identity as proposed by Adams and Marshall (1996).

Initial support for the structural validity of the scale was established in the factorial patterning of the items. Five factors that were congruent with the five functions of identity emerged. The next step was to test the hypothesis of structural coherence in this data set with a new set of data and was conducted in Study 2.

Discussion: Study 1

Study 1 provides initial support for the Functions of Identity Scale as a measure of the ego or cognitive functions of identity, as proposed by Adams and Marshall (1996). Repeated factorial analyses consistently resulted in a 5-factor solution as the most appropriate grouping of the items. The five factors were both conceptually and theoretically congruent with the functions of identity and Erikson's (1968) optimal identity. Erikson's theory of identity development encompasses a variety of processes, acting together to establish healthy or optimal identity development. The functions of identity were also conceptualized as working together, rather than as mutually exclusive processes, to describe what a mature or healthy identity provides an individual. Given this, the functions were expected to be related to one another, indicating that they work together in the process of healthy identity development. Results of correlational analyses showed that, as expected, the functions are not mutually exclusive, but rather connected by their guiding purpose, that is, the development of an optimal identity.

The substantive and structural validity components (Loevinger, 1957) of the Functions of Identity Scale were supported in Study 1. Evidence that supported the validity of the test (factor analysis and internal consistency) also supported the validity of the construct being measured. The items corresponding to the five factors that resulted from the factor analyses were conceptually and theoretically congruent with the functions of identity, therefore the content of the scale is supported by a theoretical base that is grounded in the well-established theory of identity development formulated by Erik Erikson (1968). The factorial patterning also provides initial support for the substantive validity component of Loevinger's theory of test construction. The hypothesis of

structural coherence will be tested in Study 2 whereby the cumulative quantitative model of the Functions of Identity Scale will be tested to see whether it can differentiate individuals with respect to degree. Those who score highly on the Functions of Identity Scale are expected to also score highly on the identity measure, indicating that the functions are representative of the more sophisticated identity statuses. The factorial patterning is also expected to be replicated in Study 2 in order for the structural validity component of the measure to be established.

Study 2: External Validity

Once the substantive and structural validity of the scale had been explored, the next area of focus in the validation of the scale was Loevinger's (1957) external validity component. The purpose of this study was to establish the external validity of the functions of identity scale by subjecting it to a series of validity analyses, including correlations with criterion measures and an identity measure. Administering the functions scale to a new sample would also serve as the next step in establishing structural validity.

Method

Participants

The sample consisted of 133 undergraduate students from four 200 and 300 level courses in the Department of Family Relations and Applied Nutrition at the University of Guelph. Participants ranged in age from 18 to over 25 years, with 86% of the sample ($N = 115$) ranging from 20 to 23 years ($M = 2.55$, where 2 = 20 to 21 years and 3 = 22 to 23 years). The sample was predominantly female ($N = 126$). Participants from two classes

received course credit for their participation in the study. Those from other classes participated on a strictly voluntary basis.

Measurement

Function 1: Structure. The first function of identity focuses on self-understanding, therefore, it is likely that a measure of self-certainty or stability should correlate with this function. The Rosenberg (1965) “Stability of Self Scale” consists of five statements that are indicators of a stable sense of self. Participants choose, from two responses, that which describes them best. For the first item, “Does your opinion of yourself tend to change a good deal or does it always continue to remain the same?” respondents are asked to choose from two possible responses, “changes somewhat or a great deal,” or “changes very little or not at all.” The next item has a similar structure, while the final three items require an “agree” or “disagree” response. The items were recoded and scored so that higher scores represent a more stable sense of self. An analysis of reliability indicated that this scale has a high internal consistency ($\alpha = .87$). The “Stability of Self Scale” was administered in order to determine whether the items created to measure the first function of identity were correlated with what the function proposes to do, that is, to provide the structure for understanding who one is, which may manifest itself as a stable sense of self.

Function 2: Goals. The second function of identity centers on commitments, values and goals. The “Purpose-In-Life Test” (Crumbaugh & Maholick, 1964) is a 6-item scale that measures goals, commitments, and a sense of purpose in life. Items are scored on a 5-point Likert scale, with different anchors for each statement. For example, for the first item, “In life I have:” respondents are asked to circle the number that would most

nearly be true for them (1 = no goals or aims at all to 5 = very clear goals and aims). The fourth item on this scale was dropped due to conceptual inappropriateness. This item measures a sense of responsibility, which conceptually differs from the second function. Internal consistency of the scale increased slightly after dropping the item ($\alpha = .75$ to $\alpha = .77$). Scores were summed across items, with higher scores indicating greater purpose in life. The “Purpose-in-Life Test” is expected to correlate positively with the items comprising the subscale for the second function of identity, as the functions subscale is expected to measure meaning and direction (or purpose) in life via commitments, values and goals.

Function 3: Control. The third function of identity is to provide a sense of personal control and free will and can conceptually be matched with locus of control. Having a strong sense of internal locus of control indicates a belief that the outcome of one’s actions are more contingent on what a person does (internal control orientation) than on events outside one’s personal control, such as luck or fate. A short “Locus of Control Scale” of 5-items that measure internal locus of control was used. It is a modified version of Rotter’s (1966) scale that included 13 items, 5 tapping internal locus of control, and 8 tapping external locus of control. Since internal locus of control is, on a theoretical and conceptual level, most closely associated with the third function of identity (providing a sense of personal control and free will), and in an effort to keep the entire questionnaire package as short as possible, only the internal locus of control items were used for this study. Participants were asked to respond to each statement by rating on a 5-point Likert scale how much they agree or disagree with each statement (1 = disagree to 5 = agree). Items on the scale included statements such as: “Becoming a success is a matter of hard

work. Lucky breaks have little or nothing to do with it;” “When I make plans, I am almost certain that I can make them work;” and “There is a direct connection between how hard I study and the grades I get.” The 5-item version of the scale used in this study had an adequate level of internal consistency ($\alpha = .63$), particularly considering that the more items a measure has, the more reliable it will be (Ahser, 1997). Scores were summed across items, with higher scores indicating a higher internal locus of control. It was administered with the Functions of Identity Scale in order to determine whether the items that have been constructed to measure the third function correlate with an internal locus of control measure.

Function 4: Harmony. Consistency, coherence and harmony between values, beliefs and commitments is the focus of the fourth function of identity. This harmony is expected to manifest itself in a low sense of anxiety about the self or low fear of negative evaluation from others. On a conceptual level, if one feels a coherence and harmony between one’s beliefs, values and goals, then that person should be less impacted by negative evaluation (or the fear of negative evaluation) from others. The “Fear of Negative Evaluation Scale” (Watson & Friend, 1969) is comprised of 12 statements, each tapping into some aspect of fear of negative evaluation or judgement by others: “I am unconcerned even if I know people are forming an unfavourable impression of me;” “I become tense and jittery if I know someone is sizing me up;” and “I am usually confident that others will have a favourable impression of me.” Respondents are asked to indicate how well each statement describes them by rating the statements as either true or false. Items were recoded so that higher scores represent higher fear of negative evaluation and seven items were reverse-coded. The internal consistency of this scale was high ($\alpha = .83$). The “Fear

of Negative Evaluation Scale” was administered as a companion scale in an attempt to establish the external validity for the fourth function subscale.

Function 5: Future. The essence of the fifth function is a focus on the future and one’s ability to recognize one’s potential in the form of future possibilities. This may be related to the idea of the ideal self to which a person aspires to be. The “Ideal Self Scale” (ISS) (Gough, Fiorvanti & Lazzari, 1979) is an adjective checklist consisting of 46 adjectives that describe both positive and negative attributes. The 46 adjectives are comprised of 26 adjectives that are more characteristic of the ideal self (capable, charming, insightful, and clear-thinking) and 20 adjectives that are more characteristic of the real self (hard-headed, pessimistic, confused, and impulsive). The scale is divided into two parts: the first part contains the 46 adjectives and respondents are asked to check the adjectives that best describe “how you see yourself at this time” (1 = yes, 2 = no). Later in the questionnaire package, the 46-item adjective list is presented again and respondents are asked to check the adjectives that best describe “the kind of person you would like to be (your personal ideal)” (1 = yes, 2 = no). Taken together, these two parts comprise the “Ideal Self Scale” which measures the congruency between people’s self and ideal-self descriptions. Adjectives representing the ideal self were given a weight of +1, while adjectives representing the real self were given a weight of -1 (Gough, Fiorvanti & Lazzari, 1979). A real self and ideal self score was computed for each subject. The difference between the two scores represents the level of congruence between the real and ideal self. Higher scores identify participants whose real and ideal self-descriptions are similar; lower scores identify participants whose real and ideal self-descriptions are incongruent. Individuals who score high on this measure are believed to possess the ability

to pursue and attain goals and are socially effective, whereas those who score low are said to be constricted, socially ineffective and have difficulty defining and achieving goals (Gough, Fiorvanti & Lazzari, 1979). Items corresponding to the fifth function of identity are expected to correlate highly with the ISS, both measure a future orientation with respect to realizing one's goals and achieving one's personal ideal.

Identity Measure. Since the functions of identity and the identity statuses conceptualized by Marcia (1966) are not mutually exclusive, an identity measure was also administered in Study 2. The 24-item version of the Objective Measure of Ego Identity Status (OMEIS; Adams, Shea & Fitch, 1979), rather than the 64-item revised and extended version (EOM-EIS), was used in this study due to its shortness in length. It is composed of four, six-item subscales measuring the four identity statuses originally conceptualized and operationalized by Marcia (1966): diffusion (e.g., "I haven't really considered politics. They just don't excite me much"), foreclosure (e.g., "My parents had it decided a long time ago what I should go into and I'm following their plans), moratorium (e.g., "I'm not so sure what religion means to me. I'd like to make up my mind but I'm not done looking yet"), and achievement (e.g., "It took me a long time to decide but now I know for sure what direction to move in for a career."). Respondents were asked to indicate the degree to which each statement reflected their own thoughts on a 5-point Likert scale (1 = not like me to 5 = exactly like me). One achievement item was dropped from the analysis (#24), as this was the only item whose deletion would result in a slight increase in the internal consistency of the achievement subscale ($\alpha = .60$), while deletion of any other achievement item would result in a lower alpha. Scoring for the OMEIS was performed following the rules detailed in Adams and Ethier (1999).

Procedure

Approximately 200 questionnaires were distributed to students in five classes during regular lecture periods. The questionnaire package was intended to be self-administered and contained three demographic questions to assess gender, year of academic study, and age, as well as the revised Functions of Identity Scale, Real-Self version of the ISS, Stability of Self Scale, Locus-of-Control Scale, Purpose in Life Scale, Fear of Negative Evaluation Scale, Ideal-Self version of the ISS, and the OMEIS (in that order). The questionnaire package also contained a cover information/consent form that stated the purpose of the study; instructions for completing the study; and a statement indicating that a summary of the findings of the study would be available on a website in July for interested participants. Students were verbally told by the researcher that the study was being conducted to develop an assessment device to be used in research on the assessment of self, and that it was the second study in a two-part research project. They were also informed that their participation was completely voluntary, anonymous and confidential, and were asked to sign and return the consent form with their completed questionnaire package, should they choose to participate. Participants were asked to complete the package out of class and return it to the researcher, either through the instructor of the course or via interdepartmental mail. Two classes were provided class time to complete the questionnaire for course credit, if they chose to participate. In those classes, students who did not wish to complete the questionnaire for course credit were offered alternative means by which to gain course credit so that they did not feel obligated or forced to participate in the study.

Results

The Functions Of Identity

Subjects' ratings on the Functions of Identity Scale were subjected to factor analysis to determine whether the five factor solution could be replicated with another sample. Results of the factor analysis did not provide support for the hypothesis of structural validity suggested in Study 1. A maximum likelihood, varimax rotation revealed that a four-factor solution was most appropriate. The items corresponding to the fourth function of identity (harmony) that, in the original factor analysis in Study 1 grouped together, loaded with other factors in this analysis (i.e., function 1, structure and function 2, goals). The four new factors were labeled structure, harmonious goals, future and control. In order to be considered a factor, the item had to have a factor loading of .40 or greater. Items that had secondary loadings were kept, providing that the secondary loadings were less than .40. Factor loadings are reported in Table 7. Two items were eliminated, resulting in a 20-item scale consisting of two 6-item subscales and two 4-item subscales. Internal consistency for the subscales was computed using Cronbach's (1951) alpha. The four subscales have good internal consistency (structure, $\alpha = .844$; harmonious goals, $\alpha = .796$; future, $\alpha = .796$; and control, $\alpha = .654$).

Table 7

New Functions of Identity Scale and Factor Loadings (Study 2)

Factor Label (Function)	Item Number	Factor Loading			
		1	2	3	4
Structure	38	.772			
	34	.735			
	42	.730	.316		
	30	.681			
	41	.535			
	26	.449			
Harmonious Goals	27		.726		
	32		.646	.373	
	45	.347	.608		
	39		.501		
	33		.493		
	44	.347	.451		
Future	35			.836	
	40			.833	
	43			.598	
	31			.437	

	46				.724
	29				.607
Control	36				.481
	37				.440

A correlational analysis between the new functions of identity revealed modest to moderate significant correlations between subscales. Structure was associated with all three remaining subscales. Harmonious goals was correlated with structure and future. Future correlated with all remaining scales. Finally, control was associated with structure and future (see Table 8).

Table 8

Correlations Between New Functions of Identity (Study 2)

	Harmonious			
	Structure	Goals	Future	Control
Structure	1.00	.507**	.347**	.178*
Harmonious				
Goals	.507**	1.000	.414**	.103
Future	.347**	.414**	1.000	.275**
Control	.178*	.103	.275**	1.000

** . Correlation is significant at the 0.01 level.

* . Correlation is significant at the 0.05 level.

Functions of Identity and Identity Statuses

Participants' raw scores on the OMEIS were calculated and diffusion, foreclosure, moratorium and achievement scale scores were computed for each subject. In order to assess the relationship between the functions of identity and the active and passive identity categories, participants' raw scores on the achievement and moratorium subscales were combined (active identity category) and participants' raw scores on the diffusion and foreclosure subscales were combined (passive identity category).

An initial correlational analysis (see Table 9) revealed that identity achievement was significantly and positively correlated with three of the four functions of identity at the .01 level. Achievement was not significantly correlated with harmonious goals ($r = .146$), although the relationship was in the expected direction. Identity foreclosed scores were significantly negatively correlated with all the functions of identity at the .01 level, except for foreclosed and harmonious goals, which were correlated at the .05 level. Diffusion was significantly negatively correlated with structure and future at the .05 level, and with control at the .01 level. The relationship between diffusion and harmonious goals ($r = -.004$) was non-significant. Moratorium scores were significantly negatively correlated with structure and future at the .01 level. Moratorium was unassociated with harmonious goals ($r = -.137$) or control ($r = -.114$).

Table 9

Correlations Between Functions and OMEIS Subscale Scores

	Diffusion	Foreclosure	Moratorium	Achieved
Structure	-.177*	-.384**	-.320**	.261**
Harmonious				
Goals	-.004	-.188*	-.137	.146
Future	-.185*	-.364**	-.396**	.299**
Control	-.231**	-.541**	-.114	.263**

** . Correlation is significant at the 0.01 level.

* . Correlation is significant at the 0.05 level.

Based on the conceptual framework of this study (see Figure 1), the active identity category was expected to be positively related to the functions of identity, while the passive identity category was expected to show a negative relationship with the functions. When the combined identity status groups of active and passive identity were correlated with the functions of identity (see Table 10), the passive category was found to be significantly negatively correlated with the functions of structure, future, and control at the .01 level. The relationship between harmonious goals and the passive identity category was not significant, although it was in the expected direction. The relationship between the active identity category and the functions of identity was not significant for any of the functions.

Table 10

Correlations Between Functions of Identity and Active and Passive Identity Categories

	Active Identity	Passive Identity
Structure	-.050	-.357**
Harmonious		
Goals	.004	-.121
Future	-.078	-.348**
Control	.106	-.490**

** . Correlation is significant at the 0.01 level.

Note: Active Identity (Achievement and Moratorium); Passive Identity (Diffusion and Foreclosure)

Another set of correlations (see Table 11) were performed between the functions of identity and the OMEIS scores, where the OMEIS was scored according to the classification rules for identity status categories (Adams & Ethier, 1999). Each participant was assigned a status, rather than a continuous score for each identity status, as in the previous correlations. Based on these identity status classifications (using the mean plus one-half a standard deviation for cut-offs), an identity status was assigned to each participant: diffusion (status 1, $N = 47$), foreclosure (status 2, $N = 18$), moratorium (status 3, $N = 42$) and achieved (status 4, $N = 23$). Participants were then grouped in the passive/active identity category (passive = 1 and included status 1 and status 2; active = 2 and included status 3 and status 4). Correlations in Table 11 show that the higher the

status, the stronger the relationship between the status and the functions, except for harmonious goals. The passive/active identity category was also found to be significantly related to all functions except harmonious goals.

Table 11

Correlations Between the Functions of Identity, Identity Statuses and Passive/Active Status

Categories

	Structure	Harmonious	Future	Control
	Goals			
Identity Status	.224*	.155	.268**	.258**
Passive/Active	.248**	.126	.255**	.278**

** . Correlation is significant at the 0.01 level.

* . Correlation is significant at the 0.05 level.

Note: Status 1 = Diffusion, 2 = Foreclosure, 3 = Moratorium, 4 = Achievement.

Passive Identity =1 (consists of Diffusion and Foreclosure).

Active Identity = 2 (consists of Achievement and Moratorium).

The previous set of correlations was conducted allowing for participants who were in transition (e.g., diffusion-foreclosure, moratorium-achievement, diffusion-moratorium) to be classified according to the four main identity statuses. The next set of correlations was performed on a subset of those participants whose identity status classifications were non-transitional (i.e., pure identity status): diffusion (status 1, N = 10), foreclosure (status 2, N = 10), moratorium (status 3, N = 10) and achievement (status 4, N = 23). The

correlations (see Table 12) between pure identity status classifications (non-transitional) and the functions of identity revealed that the higher the status, the stronger the relationship to the functions, except for structure. While the correlation between passive/active identity category and control was the only significant one, the relationship between the passive/active categories and the other functions were in the expected direction.

Table 12

Correlations Between Functions of Identity, Pure Identity Statuses and Pure Passive/Active Identity Status Categories

	Structure	Harmonious Goals	Future	Control
Pure Identity Status	.263	.276*	.274*	.392**
Pure Passive/Active	.258	.216	.247	.395**

** . Correlation is significant at the 0.01 level.

* . Correlation is significant at the 0.05 level.

Note: Status 1 = Pure Diffusion, 2 = Pure Foreclosure, 3 = Pure Moratorium,
4 = Pure Achievement.

Pure Passive Identity = 1 (consists of Pure Diffusion and Pure Foreclosure).

Pure Active Identity = 2 (consists of Pure Achievement and Pure Moratorium).

A final correlation was performed between the functions of identity and the identity statuses, based on the standardized scores (z-scores) for each measure. The results revealed similar correlations as in the previous two methods.

Functions of Identity and Comparison Measures

Significant correlations (see Table 13) were found between each of the functions and its comparison measure, except future and the Ideal Self Scale (ISS). Structure was significantly related to the Stability of Self Scale ($r = .424$). Harmonious goals (the combination of the original functions, harmony and goals) was negatively correlated ($r = -.171$) with the Fear of Negative Evaluation Scale (expected to be negatively correlated with harmony) and positively correlated ($r = .68$) with the Purpose in Life Scale (expected to be positively correlated with goals). Control and the Locus-of-Control Scale also showed a significant positive relationship ($r = .188$).

Table 13

Correlations Among the Functions of Identity and the Comparison Measures

	Structure	Harmonious Goals	Future	Control
Stability of Self	.424** ^a	-.263**	.134	.051
Purpose In Life	.482**	.628** ^a	.456**	.116
Fear of Neg. Evaluation	-.407**	-.171* ^a	-.245**	-.159
Ideal Self Scale	-.294**	-.141	-.248** ^a	-.110
Locus of Control	.192*	-.033	.194*	.188* ^a

** . Correlation is significant at the 0.01 level.

* . Correlation is significant at the 0.05 level.

^a Correlation coefficients corresponding to the function with which the scale was expected to correlate.

Analysis of Variance

In addition to examining the relationships between the functions of identity, identity status classifications (transitional and pure) and the passive/active identity categories in correlational analyses, one-way analyses of variance were computed to assess significant differences between comparison groups (see Tables 14-17). Table 14 reports the results of one-way analysis of variance for the functions of identity with identity status. A significant effect of identity status emerged for structure, future and control. Post-hoc Sheffe tests revealed that for structure, foreclosed and achieved status individuals were significantly different ($p < .05$). Similar effects were found for future and control, where

both diffused and foreclosed status individuals significantly differed from those who were classified as identity achieved ($p < .05$). Post hoc Duncan tests revealed two groupings of homogeneous scores for future, with moratorium and achieved statuses included in the grouping of higher scores, and foreclosure, diffusion and moratorium statuses included in the grouping of lower scores. For structure and control, three groupings of homogeneous scores were revealed. The grouping of higher scores always included moratorium and achieved statuses; the grouping of lower scores included foreclosed status individuals for both and diffused status only for structure. The middle group of scores included diffused and moratorium statuses for both structure and control.

Table 14

One-Way Analysis of Variance for the Functions of Identity by Identity Status

Variable	Mean for Identity Status				F
	Diffusion	Foreclosure	Moratorium	Achievement	
Structure	22.1	21.0 ^a	23.0	24.0 ^a	3.98*
Harmonious					
Goals	22.5	22.5	22.9	24.1	1.47
Future	13.6 ^a	13.1 ^b	14.5	15.9 ^{a, b}	4.3*
Control	12.4 ^a	11.2 ^b	13.0	14.2 ^{a, b}	6.3**
	(N = 47)	(N = 18)	(N = 42)	(N = 23)	

*. $p \leq .01$ **. $p = .001$ Note: Shared superscripts indicate means that are significantly different.

Non-shared superscripts indicate means that are not significantly different.

Table 15 reports the results of one-way analysis of variance for the functions of identity with the passive/active identity status categories. A significant effect of passive/active identity emerged for structure, future and control.

Table 15

One-Way Analysis of Variance for the Functions of Identity by Passive/Active IdentityCategories

Variable	Mean for Identity Category		F
	Passive Identity	Active Identity	
Structure	21.8	23.3	8.35*
Harmonious Goals	22.5	23.3	2.07
Future	13.4	15.0	8.91*
Control	12.1	13.4	10.73**
	(N = 65)	(N = 65)	

*. $p \leq .005$ **. $p = .001$

One-way analyses of variance of the functions of identity and the pure identity statuses (Table 16) revealed similar results as those obtained in the one-way analysis of variance of the functions and the identity statuses (that included transitional status individuals). A significant effect of pure identity status emerged for structure, future, and control. Post-hoc Sheffe tests revealed that pure foreclosed and pure achieved status individuals differed significantly for structure, future, and control ($p < .05$). No significant effects were found for harmonious goals. Post hoc Duncan tests revealed that for each

function except harmonious goals, there were two groupings of homogeneous scores. The grouping of higher scores always included pure diffused, pure moratorium and pure achieved statuses, except for future which did not include pure moratorium in the subset of higher scores. The grouping of lower scores included pure foreclosed, pure moratorium and pure diffused identity statuses for each.

Table 16

One-Way Analysis of Variance for the Functions of Identity by Pure Identity Status

Variable	Mean for Pure Identity Status				F
	Pure Diffusion	Pure Foreclosure	Pure Moratorium	Pure Achievement	
Structure	22.6	20.3 ^a	21.5	24.0 ^a	3.69*
Harmonious					
Goals	22.6	22.5	22.4	24.1	2.16
Future	14.5	12.8 ^a	13.4	15.9 ^a	3.82*
Control	12.1	11.3 ^a	12.9	14.2 ^a	4.04*
	(N = 10)	(N = 10)	(N = 10)	(N = 23)	

*. $p < .05$

Note: Shared superscripts indicate means that are significantly different.

Non-shared superscripts indicate means that are not significantly different.

Table 17 reports the results of one-way analysis of variance for the functions of identity with the pure passive/active identity status categories. A significant effect of pure passive/active identity emerged for control only.

Table 17

One-Way Analysis of Variance for the Functions of Identity by Pure Passive/Active Identity Categories

Variable	Mean for Pure Identity Category		F
	Passive Identity	Active Identity	
Structure	21.5	23.2	3.64
Harmonious Goals	22.6	23.6	2.48
Future	13.7	15.1	3.30
Control	11.7 ^a	13.8 ^a	9.40*
	(N = 20)	(N = 33)	

*. $p < .01$

Note: Shared superscripts indicate means that are not significantly different.

Non-shared superscripts indicate means that are significantly different.

Discriminant Function Analysis

In order to test the predicted relationship between identity status and the functions of identity, the four identity statuses were treated as known groups and the functions as

independent variables in a discriminant function analysis (see Table 18). One significant function accounted for 93% of the variance (Wilks' lambda = .784, $df = 12$, $p < .01$). The largest difference in the functions of identity, as determined by the group centroid comparisons, was between identity foreclosed and identity achieved individuals. A close examination of the data suggests that achieved individuals have: a greater understanding of who they are; more harmony between values, goals and commitments; a stronger sense of future possibilities; and greater sense of control over their lives than do individuals who are diffused, foreclosed or in moratorium. Moratorium and achieved individuals were strongest in these areas; diffused and foreclosed individuals were weakest. The data also suggest that foreclosed individuals have the weakest personal control over their lives and least structure for understanding who one is than all the identity statuses.

Table 18

Discriminant Function Coefficients, Mean Scores, and Standard Deviations Between Identity Status Groups and the Functions of Identity

Predictor Variable	Standardized discriminant function coefficient	Identity Status							
		<u>Diffusion</u>		<u>Foreclosure</u>		<u>Moratorium</u>		<u>Achievement</u>	
		M	SD	M	SD	M	SD	M	SD
Structure	.435	22.1	3.5	20.9	3.9	23.0	2.7	24.0	2.1
Harmonious									
Goals	-.066	22.5	2.9	22.5	2.2	22.9	4.2	24.1	1.4
Future	.401	13.6	3.1	13.1	2.9	14.5	2.9	15.9	2.1
Control	.660	12.4	2.7	11.2	1.7	13.0	2.1	14.2	2.3
Group Centroids		-.240		-.827		.173		.821	

Note: Eigenvalue .252; percent of variance = 93.1%; canonical correlation = .449; Wilks' lambda = .784; df = 12; p < .01; 37.7% of cases in each group correctly classified.

Another discriminant function analysis was performed to test the predicted relationship between identity status category (passive/active) and the functions of identity. The passive and active identity categories acted as the predictor variables and the functions of identity as independent variables. One significant function accounted for 100% of the variance (Wilks' lambda = .866, $df = 4$, $p = .001$). Examination of the data in Table 19 suggests that individuals in the active identity category have: a greater understanding of who they are; more harmony between values, goals and commitments; a stronger sense of future possibilities; and greater sense of control over their lives than do individuals in the passive identity category. Since the active identity category contains the more developed or mature identity statuses, this data provides support for the functions of identity as representative of Erikson's (1968) optimal identity.

Table 19

Discriminant Function Coefficients, Mean Scores, and Standard Deviations Between Passive/Active Identity Categories and the Functions of Identity

Predictor Variable	Standardized canonical discriminant function coefficient	Passive Identity		Active Identity	
		M	SD	M	SD
Structure	.465	21.8	3.6	23.3	2.5
Harmonious Goals	-.125	22.5	2.7	23.3	3.5
Future	.453	13.4	3.1	15.0	2.8
Control	.591	12.1	2.5	13.5	2.2
Group Centroid		-.391		.391	

Note: Eigenvalue = .155; percent of variance = 100%; canonical correlation = .366; Wilk's lambda = .866; df = 4; $p < .001$; 62.3% of original cases correctly classified.

Discussion: Study 2

Functions of Identity Scale

Results of the factor analysis did not provide support for the hypothesis of structural validity suggested in Study 1. Factor analysis revealed four factors corresponding to the five functions of identity whereby function 2 (providing meaning and

direction through commitments, values and goals) and function 4 (providing for consistency, coherence and harmony between values, beliefs and commitments) collapsed together to form one function (harmonious goals). The items that constitute this factor emphasize consistency between values and beliefs and how one's values and beliefs inform one's goals and the commitments one makes. Contrary to expectations, harmonious goals was not found to be correlated with the other functions, while the other three functions were all correlated with one another. These results may be understood in terms of conceptual and methodological issues.

On a conceptual level, the second (goals) and fourth (harmony) functions of identity proposed by Adams and Marshall (1996) may be an extension of one another rather than two independent functions. This argument would provide support for viewing the functions of identity as four functions, rather than five. Since harmonious goals was not found to be related to the other functions, an alternative explanation might be in order. It may be that the items corresponding to the harmonious goals function may not accurately measure the construct. It could also be argued that the factorial pattern resulting from the second study was conceptually misleading. Perhaps the items comprising the harmonious goal function, while they covary well on a factorial level, do not work well together, conceptually, as a measure of Adams and Marshall's (1996) second and fourth functions of identity.

Alternatively, on a methodological level the difference in factorial patterning from Study 1 to Study 2 may also be explained, in part, by the difference in sample sizes across studies. Clark and Watson (1995) recommend a sample size of a minimum of 300 respondents for the initial stage of test construction (i.e., Study 1). The sample size in

Study 2 was less than half the size of the sample in the first study. Perhaps a sample size that is closer to the first should also be used when testing the hypothesis of structural coherence of the newly constructed scale. This might support the likelihood that the results across studies are based on the properties of the scale being tested, rather than the size of the sample utilized. The smaller sample size in the second study may have impacted the emergence of a significant correlation between harmonious goals and the other functions of identity. Given these conceptual and methodological issues, conceptualizing the functions of identity as four rather than five functions, based solely on the results of Study 2, should be done with caution.

Functions of Identity and Ego Identity Status

As expected, the higher the identity status, the stronger the relationship with the functions of identity, except for harmonious goals. The results were consistent for both raw scores and the identity status classification method. These results suggest that individuals whose identity development is at its most sophisticated or optimal stage have the structure for understanding who one is, a sense of personal control and free will, and the ability to recognize their potential in the form of future possibilities and alternative choices. Contrary to expectation, however, harmony between values and beliefs as they inform one's goals and commitments was only found to be correlated with the foreclosed identity status (negatively, as expected). This significant relationship casts doubt upon discarding the usefulness of the items corresponding to this function entirely, yet given the potential conceptual and methodological issues concerning the harmonious goals subscale,

the relationship between the foreclosed status and the harmonious goals function should be considered with caution at this time.

Individuals in the moratorium status were found to have a structure for understanding the self and a sense of future possibilities, but were not found to have a strong sense of personal control or harmony between values, beliefs, goals and commitments. These results are not surprising given that the moratorium stage is represented by exploration without commitments. Youth who are actively exploring have not yet mastered an integrated sense of self, as have those who are identity achieved. The differences between these two groups with respect to the functions of identity can be understood, in part, in terms of the dimensions of exploration and commitment on which Marcia's (1966) Identity Status Paradigm is based.

The most significant differences between identity status groups were expected for diffusion and achievement, as they represent the least developed and most developed identity statuses, respectively. As expected, unlike achieved individuals, diffused individuals do not have a structure for understanding the self, a sense of personal control and free will, or a sense of future possibilities and choices. Neither achieved nor diffused status individuals showed consistency or harmony between beliefs, values and goals, but this may be a reflection of the structure of the harmonious goals subscale rather than a reflection of the degree to which these processes are part of achieving a healthy identity. Interestingly, foreclosed status individuals had a similar relationship as diffused individuals to the functions of identity and the identity achieved status. Foreclosed individuals also showed a significant lack of structure, personal control, and sense of future

possibilities (in addition to lack of properties associated with the harmonious goals function mentioned earlier).

The relationship between the foreclosed and achieved statuses were consistent for structure, future, and control in post-hoc Sheffe tests. Achieved and foreclosed individuals were significantly different with respect to having the structure to understand the self, the ability to recognize potential in the form of future possibilities, and a sense of personal control and free will. Diffused and achieved statuses were also significantly different with respect to their ability to recognize potential in the form of future possibilities, and having a sense of personal control and free will.

When the identity statuses were divided into the active and passive categories, results of both analysis of variance and correlational analysis indicated that as individuals move from passive to active identity, the functions of identity become stronger, except for harmonious goals. This finding was not replicated, however, when identity status raw scores were used to categorize individuals into active and passive identity in a correlational analysis. When raw scores were used, a significant relationship between the active identity category and the functions of identity was not found. The passive identity category, however, was significantly negatively related to all the functions except harmonious goals. This contradiction may be explained by the different coding systems used in different analyses. The use of OMEIS raw scores is a less sophisticated coding method than the cutoff score method of assigning identity statuses outlined by Adams and Ethier (1999). When the latter method was used, it yielded consistent significant results for the passive/active identity category with the functions of identity across analyses, thus suggesting that an active/passive categorical division may be useful in identity research.

The results of analyses (correlations and ANOVA) utilizing status classifications rather than identity raw scores suggest that individuals whose identity is based on identification and imitation (external self-processes) such as those in the diffused or foreclosed identity status (passive identity) have less structure for understanding the self, less personal control and free will, and less of an ability to recognize potential in the form of future possibilities and choices than do individuals whose identity is based on active, self-constructive processes (active identity), such as moratorium and achieved.

When the relationship between the identity statuses and the functions of identity was explored using pure identity statuses (non-transitional), contradictory results were found. Results of correlational analysis showed that the higher the pure identity status, the stronger the relationship with the functions of identity, except for structure. This would suggest that pure achieved, and to some degree pure moratorium, individuals possess a sense of personal control and free will, a sense of future possibilities, and harmony between beliefs, values and goals. They do not, however, possess the structure for understanding the self. The results of one-way analysis of variance, however, revealed that pure identity status was significantly related to the functions of identity, except for harmonious goals. These findings are inconsistent with the results of correlations and analyses of variance that include the non-pure (transitional) identity statuses. One possible explanation for these differences and incongruities is the small size of the pure identity status groups ($N = 53$) compared to the greater number of individuals that were classified as diffused, foreclosed, moratorium and achieved when transitional identity statuses were included in the classification system ($N = 130$).

A discriminant function analysis was used to augment the one-way analyses of variance. As a multivariate tool, discriminant function analysis allows the researcher to identify a combination of variables that maximally distinguish between known groups (e.g., identity statuses) and provides a classification for using the function to predict placement into one or more known groups. When all four identity statuses (Table 17) were included as known groups, group centroids reveal that both diffusion (centroid = -.24) and foreclosure (centroid = -.827) manifest lower scores on the four subscales of the Functions of Identity Scale. In contrast, both moratorium (centroid = .173) and achievement (centroid = .821) score higher on the functions of identity. The strongest distinction was between foreclosure as a passive form of identity that is based on simple identification and imitation versus identity achievement which is based on self-construction and even repudiation of early childhood identifications. Comparisons between the passive identity group (diffusion + foreclosure) and the active identity group (moratorium + achievement) once again reveal that passive identity is associated with lower scores than active forms of identity. Again, this provides further proof that the four functions distinguish between passive and active identity formation.

The relationship between the higher identity statuses and the functions of identity provides support for the discriminative validity of the Functions of Identity Scale. Since the scale is intended to measure the process that are associated with active identity formation to achieve healthy and optimal identity development, a significant relationship between the functions and the more sophisticated identity statuses suggests that the construct of the functions of identity is conceptually valid. Furthermore, the results of this

study suggest that the newly constructed scale is, for the most part, measuring the construct as it was originally conceptualized by Adams and Marshall (1996).

Functions of Identity and Comparison Measures

The purpose of Study 2 was to establish the external validity component of the Functions of Identity Scale, as recommended by Loevinger (1957). Correlations with comparison measures were utilized for this purpose. As expected, the functions were significantly related to the scales with which they were expected to correlate, except for future and the “Ideal Self Scale” (Gough, Fiorvanti & Lazzari, 1979). Although the ISS was administered along with the Functions scale and was intended to measure the congruency between the real and ideal self, the data were not used, as it is believed that there may have been some confusion in responses to the items on the scale. Close inspection of the data for the ISS suggests that many respondents may have misread the instructions for the second part of the scale (i.e., choosing adjectives that best describe their “ideal self” may have been misread as “real self”). Upon further inspection, problems with gendered constructions of certain adjectives also became apparent. Given these methodological issues, comparisons between the future function and the ISS were not made.

The relationship between structure and the “Stability of Self Scale” (Rosenberg, 1965) was significant, thus providing support for the conceptualization of the items for this function. The comparison scale measures the stability of self and individuals who have the structure for understanding the self have a high measure of stability of self. The control function was positively related to a measure of internal locus of control, suggesting that the items for the control subscale actually measure personal control. Since the harmonious

goals function is a combination of the harmony and goals functions from Study 1, two scales were correlated with this function. Both the “Purpose-In-Life-Test” (Crumbaugh & Maholick, 1964), which measures goals, commitments and a sense of purpose in life, and the “Fear of Negative Evaluation Scale” (Watson & Friend, 1969), which measures the fear of negative evaluation or judgement by others, were significantly related to the harmonious goals function. This provides external support for the function as a measure of harmony between values and beliefs as they inform one’s commitments and goals. A low fear of negative evaluation was related to this function, as was expected, suggesting that individuals for whom these processes have been integrated into the self have a low anxiety about the self and are thus not significantly impacted by negative evaluations or judgements.

General Discussion

The purpose of this thesis was to construct a reliable indicator of the functions of identity proposed by Adams and Marshall (1996). Test construction and validation followed Loevinger’s (1957) method of test construction with a focus on three components of validity: substantive, structural and external. The present findings provide support for the substantive and external validity components of the Functions of Identity Scale. The structural validity of the scale has not been fully established.

The current findings also provide support for considering the process of identity formation based on the distinctions of active and passive identity. Active identity, based on active self construction that organizes, structures and constructs the self, is associated with the self-regulatory processes of the functions of identity. Passive identity, on the

other hand, is not related to the functions of identity, suggesting that external self-processes such as imitation and identification are associated with less mature identity development. Since the functions of identity have been conceptualized to represent optimal identity development as originally articulated by Erikson (1968), the relationship between the active and passive identity distinctions and the functions of identity provides support for the conceptualization of the construct (the functions of identity) and the operationalization of the construct via the items that comprise the Functions of Identity Scale. The current findings suggest that the new instrument is measuring what it purports to measure, that is, the functions of identity.

Limitations

There are certain limitations to be considered with respect to this research project, particularly in the area of generalizability. The sample consists of university students and the results, therefore, cannot be generalized to other populations. Both Study 1 and Study 2 were conducted using a predominantly white, female sample, thus the results cannot be generalized across cultures or genders. It can be argued, based on research in identity development that has considered gender (e.g., Markstrom-Adams & Adams, 1995), that significant differences in identity development across genders do not exist. For example, Markstrom-Adams and Adams (1995) found that adolescent boys and girls were more similar than different in their process of identity formation between grades 10 and 12.

Issues of cultural differences in identity development must also be considered when discussing the generalizability of the findings. One can infer from Erikson's (1968) formulation of identity development that it is a universal phenomenon, although Erikson does attempt to address possible differences in identity development across culture and

gender. He argues the importance of considering a “more inclusive identity” that encompasses an “historical actuality” that determines what an individual can count on from the wider cultural identity in the process of identity development. Researchers have found that, while differences in patterns of identity formation may exist across cultures, the differences can often be discussed in terms of connectedness and family values (passive identity) versus the goals of individuation, differentiation and choice (active identity) (e.g., Cooper & Carlson, 1991; Markstrom-Adams & Adams, 1995). While there may be specific cultural factors that impact the pattern of identity development in youth, this study looks only at particular identity statuses, rather than the number of individuals in a certain sample that are classified as diffused, foreclosed, moratorium or identity achieved. Since the aim of this research project is test construction and validation, it is concerned with the relationship between identity status and the Functions of Identity Scale to determine whether the items in the scale actually measure the construct being studied.

A second limitation of this study concerns sample size. Specifically, sample size must be considered with respect to establishing the structural validity of the scale and explaining the difference in the factorial patterning of the Functions of Identity items across studies. The sample used in Study 1 was over twice the size of the sample used in Study 2. Given this difference, it is difficult to discern whether the differences in factorial patterning across studies is related to the stability of the items and their conceptual compatibility to the construct being measured, or to the relatively small sample size used in the second study. Given this limitation, the structural validity of the Functions of Identity Scale was not clearly established in this study, but highly suggested.

A third factor to consider when reviewing the results of this thesis is that the behavioural consequences of the functions of identity were not directly studied in this current work. While the conceptual model (Figure 1) of this study suggests that the functions of identity would manifest themselves in certain behaviours over others, the empirical measurement of this proposition is beyond the scope of this study. Future research focused on the behavioural outcomes of healthy identity development may find that different behavioural consequences exist for the passive and active identity categories.

Future Research

A chief limitation on the conclusions drawn from these studies is that the research is preliminary in nature. As with all scale validation techniques, repetition is the key to validation. Further research with the Functions of Identity Scale is needed in order for it to be considered a valid and reliable indicator of the functions of identity proposed by Adams and Marshall (1996). While the current findings provide initial support for the substantive, structural and external validity components of the measure, some inconsistencies across studies need to be examined further. The next study should attempt to replicate Study 2 with a larger sample and an alternative comparison measure for the future subscale, since methodological issues did not allow for correlations between the future subscale and the Ideal Self Scale to be computed. Thus, while the external validity component for three of the four functions revealed in Study 2 was established, conclusions about the external validity component of the future subscale cannot be drawn at this time. The next step in the validation of the Functions of Identity Scale should focus on examining whether the factor structure of Study 1 can be replicated (structural validity) and on determining the external validity of the future subscale.

Implications for Use in a Clinical Setting

Once the validity and reliability of the instrument are established, the Functions of Identity Scale may serve as a useful tool in both clinical and research settings. The self-report format and small number of items represent a time saving characteristic of the measure that should make it attractive for use in a wide variety of settings. Clinicians working with youth may find that a short measure of the Functions of Identity can be useful in their work with youth on issues around identity development which are understood to be a critical developmental component of adolescence and early adulthood (Erikson, 1968), despite the presenting problem. This measure can be used as a quick and easy indicator of the degree to which each of the functions of identity is present in an individual's life. This can be a useful way to determine the areas of the development of self that may be most useful to focus on in working with youth. Since healthy identity development has been found to be associated with commitment (Adams, Shea, & Fitch, 1979); goal directedness and self-motivation (Blustein & Palladino, 1991); internal locus of control (Abraham, 1983; Bennion, 1988); non-conformity to peer pressure (Adams, Ryan, Hoffman, Dobson, & Nielsen, 1985); lower substance abuse (Jones, Hartmann, Grochowski, & Glider, 1989; Bishop, Macy-Lewis, Schnekloth, Puswella & Strussel, 1997); conscientiousness (Clancy & Dollinger, 1993); academic adjustment (Carlson, 1986; Francis, 1981); and healthier and adaptive defense mechanisms (Cramer, 1995), clinical work that includes a focus on identity development and the functions of identity could have beneficial results, regardless of the issue(s) that brought the individual to therapy.

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Appendix A

The Functions of Identity Scale (Study 1)

INSTRUCTIONS: Please place a circle around the numbered response that best represents how well each of the following statements describes you.

1. I have a clear awareness of myself as a unique individual.

1	2	3	4	5
never	seldom	sometimes	often	always

2. The values I have developed influence my behaviours.

1	2	3	4	5
never	seldom	sometimes	often	always

3. I believe that my behaviours and actions are a form of self-expression of my identity.

1	2	3	4	5
never	seldom	sometimes	often	always

4. My values and beliefs are consistent with the commitments that I make in my life at this time.

1	2	3	4	5
never	seldom	sometimes	often	always

5. I have the capacity to fulfil that to which my self-initiative and sense of purpose lead me.

1	2	3	4	5
never	seldom	sometimes	often	always

6. I am conscious of growing and evolving into the person that I want to be.

1	2	3	4	5
never	seldom	sometimes	often	always

7. I do not have strong values or goals.

1	2	3	4	5
never	seldom	sometimes	often	always

8. I am an independent and autonomous person.

1	2	3	4	5
never	seldom	sometimes	often	always

9. I feel a lot of anxiety about how my values and beliefs play out in my actions and behaviours.

1	2	3	4	5
never	seldom	sometimes	often	always

10. I do not have a sense of a tangible future ahead of me (e.g. career).

1	2	3	4	5
never	seldom	sometimes	often	always

11. I have actively constructed a strong commitment to my values and goals.

1	2	3	4	5
never	seldom	sometimes	often	always

12. I don't really understand my "self."

1	2	3	4	5
never	seldom	sometimes	often	always

13. I am a goal-directed person.

1	2	3	4	5
never	seldom	sometimes	often	always

14. I seem to passively accept the values and beliefs of others.

1	2	3	4	5
never	seldom	sometimes	often	always

15. I feel a sense of peace with my self and my identity.

1	2	3	4	5
never	seldom	sometimes	often	always

16. I have what it takes to make my future a reality.

1	2	3	4	5
never	seldom	sometimes	often	always

17. I am certain about my self, being, in part, independent of others.

1	2	3	4	5
never	seldom	sometimes	often	always

18. I am not clear about who I am and/or where I am going.

1	2	3	4	5
never	seldom	sometimes	often	always

19. My sense of free will guides my choices and actions.

1	2	3	4	5
never	seldom	sometimes	often	always

20. I accept that my values and beliefs are coherent with the person that I understand myself to be.

1	2	3	4	5
never	seldom	sometimes	often	always

21. I am undecided about where I will be in the future.

1	2	3	4	5
never	seldom	sometimes	often	always

22. I do not have clear life goals that I have constructed on my own.

1	2	3	4	5
never	seldom	sometimes	often	always

23. My sense of self is continually unfolding but the core (foundation) remains mostly the same.

1	2	3	4	5
never	seldom	sometimes	often	always

24. I tend to set goals and then work towards making them happen.

1	2	3	4	5
never	seldom	sometimes	often	always

25. I play an active role in constructing my life.

1	2	3	4	5
never	seldom	sometimes	often	always

26. Who I am is not very close to the person that I want to be.

1	2	3	4	5
never	seldom	sometimes	often	always

27. I have no idea what my future holds for me.

1	2	3	4	5
never	seldom	sometimes	often	always

28. I haven't done much growing "as a person." I am pretty much the same person I was five years ago.

1	2	3	4	5
never	seldom	sometimes	often	always

29. Self-motivation, based on my sense of self, is one of my strengths.

1	2	3	4	5
never	seldom	sometimes	often	always

30. While I am influenced by others, I make my own independent decisions.

1	2	3	4	5
never	seldom	sometimes	often	always

31. My values and beliefs are an accurate reflection of who I am.

1	2	3	4	5
never	seldom	sometimes	often	always

32. My potential, derived from my sense of purpose in life, will be recognized in my choices and in my future ahead.

1	2	3	4	5
never	seldom	sometimes	often	always

33. I am most conscious of my sense of identity when I must face change.

1	2	3	4	5
never	seldom	sometimes	often	always

34. My commitments or chosen values or goals provide meaning in my life.

1	2	3	4	5
never	seldom	sometimes	often	always

35. I understand my life as being meaningful through identification with my parent(s)' values.

1	2	3	4	5
never	seldom	sometimes	often	always

36. My values and beliefs say a lot about who I am.

1	2	3	4	5
never	seldom	sometimes	often	always

37. My sense of purpose in life will help guide my future.

1	2	3	4	5
never	seldom	sometimes	often	always

38. Much of who I am seems to be based on compliance to my parents' wishes.

1	2	3	4	5
never	seldom	sometimes	often	always

39. I accept who I am.

1	2	3	4	5
never	seldom	sometimes	often	always

40. I have a strong sense of direction in my life and the commitments that I make reflect this direction.

1	2	3	4	5
never	seldom	sometimes	often	always

41. As I build my sense of self, I feel freedom to set my own goals.

1	2	3	4	5
never	seldom	sometimes	often	always

42. I feel I have a consistent sense of self from one day to the next.

1	2	3	4	5
never	seldom	sometimes	often	always

43. I am who I guide myself to be.

1	2	3	4	5
never	seldom	sometimes	often	always

44. As I express my sense of who I am, I feel free and autonomous.

1	2	3	4	5
never	seldom	sometimes	often	always

45. I am certain that I know myself.

1	2	3	4	5
never	seldom	sometimes	often	always

46. I believe that my values and goals are congruent with my actions.

1	2	3	4	5
never	seldom	sometimes	often	always

47. I do not feel self-reliant.

1	2	3	4	5
never	seldom	sometimes	often	always

48. I think my vision of the ideal self is close to how I am now.

1	2	3	4	5
never	seldom	sometimes	often	always

49. The decisions I make today build the promise of my future sense of self.

1	2	3	4	5
never	seldom	sometimes	often	always

50. I control my own behaviour and actions.

1	2	3	4	5
never	seldom	sometimes	often	always

51. I am not comfortable with myself.

1	2	3	4	5
never	seldom	sometimes	often	always

52. My values and goals are congruent with the commitments that I make.

1	2	3	4	5
never	seldom	sometimes	often	always

53. I prefer to comply with normal standards of behaviour than to push the limits of self-expression.

1	2	3	4	5
never	seldom	sometimes	often	always

54. I believe my values, beliefs and commitments fit together.

1	2	3	4	5
never	seldom	sometimes	often	always

55. If I initiate things I will find what I am capable of doing.

1	2	3	4	5
never	seldom	sometimes	often	always

56. I feel that my values and goals are socially acceptable.

1	2	3	4	5
never	seldom	sometimes	often	always

57. My sense of who I am is based on self-expression and a feeling of free will.

1	2	3	4	5
never	seldom	sometimes	often	always

58. I know myself well and I feel comfortable with who I am.

1	2	3	4	5
never	seldom	sometimes	often	always

59. Learning what I am capable of doing provides the basis for deciding what I will become.

1	2	3	4	5
never	seldom	sometimes	often	always

60. I feel anxiety and upset over the goals and values I have made commitments toward.

1	2	3	4	5
never	seldom	sometimes	often	always

61. Please indicate your gender.

1 = male

2 = female

62. What year of study are you currently enrolled in?

1 = first year

2 = second year

3 = third year

4 = fourth year

5 = other

63. In which age group do you fall?

1 = 18 to 19 years

2 = 20 to 21 years

3 = 22-23 years

4 = over 24 years

Appendix B

The Revised Functions of Identity Scale (Study 2)

INSTRUCTIONS: Please circle the numbered response that best represents how well each of the following statements describes you. Please be sure to transfer your responses to the answer sheet provided.

25. Learning what I am capable of doing provides the basis for deciding what I will become.

1	2	3	4	5
never	seldom	sometimes	often	always

26. My values and beliefs are consistent with the commitments that I make in my life at this time.

1	2	3	4	5
never	seldom	sometimes	often	always

27. I am a goal-directed person.

1	2	3	4	5
never	seldom	sometimes	often	always

28. My values and beliefs say a lot about who I am.

1	2	3	4	5
never	seldom	sometimes	often	always

29. Much of who I am seems to be based on compliance to my parent(s)' wishes.

1	2	3	4	5
never	seldom	sometimes	often	always

30. I am certain that I know myself.

1	2	3	4	5
never	seldom	sometimes	often	always

31. I do not have a sense of a tangible future ahead of me (e.g. career).

1	2	3	4	5
never	seldom	sometimes	often	always

32. I tend to set goals and then work towards making them happen.

1	2	3	4	5
never	seldom	sometimes	often	always

33. While I am influenced by others, I make my own independent decisions.

1	2	3	4	5
never	seldom	sometimes	often	always

34. I accept who I am.

1	2	3	4	5
never	seldom	sometimes	often	always

35. I am undecided about where I will be in the future.

1	2	3	4	5
never	seldom	sometimes	often	always

36. I seem to passively accept the values and beliefs of others.

1	2	3	4	5
never	seldom	sometimes	often	always

37. I prefer to comply to normal standards of behaviour than to push the limits of self-expression.

1	2	3	4	5
never	seldom	sometimes	often	always

38. I feel I have a consistent sense of self from one day to the next.

1	2	3	4	5
never	seldom	sometimes	often	always

39. My values and beliefs are an accurate reflection of who I am.

1	2	3	4	5
never	seldom	sometimes	often	always

40. I have no idea what my future holds for me.

1	2	3	4	5
never	seldom	sometimes	often	always

41. I believe that my values and goals are congruent with my actions.

1	2	3	4	5
never	seldom	sometimes	often	always

42. I feel a sense of peace with my self and my identity.

1	2	3	4	5
never	seldom	sometimes	often	always

43. I do not have clear life goals that I have constructed on my own.

1	2	3	4	5
never	seldom	sometimes	often	always

44. I accept that my values and beliefs are coherent with the person that I understand myself to be.

1	2	3	4	5
never	seldom	sometimes	often	always

45. Self-motivation, based on my sense of self, is one of my strengths.

1	2	3	4	5
never	seldom	sometimes	often	always

46. I understand my life as being meaningful through identification with my parent(s)' values.

1	2	3	4	5
never	seldom	sometimes	often	always