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13. MULTIPLE DISCREPANCIES THEORY (MDT)

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ABSTRACT. A fairly thorough account of multiple discrepancies theory (MDT) is presented, with a review of its historical antecedents and an examination of its strength in accounting for the happiness (H) and satisfaction (S) of nearly 700 university undergraduates. Basically, MDT asserts that H and S are functions of perceived gaps between what one has and wants, relevant others have, the best one has had in the past, expected to have 3 years ago, expects to have after 5 years, deserves and needs. MDT explained 49% of the variance in H, 53% in global S and 50% or more in 7 out of 12 domain S scores. The domains studied were health, finances, family, job, friendships, housing, area, recreation, religion, self-esteem, transportation and education.

INTRODUCTION

The aim of this paper is to present a fairly thorough and rigorous account of multiple discrepancies theory (MDT), review its historical antecedents and submit it to some empirical tests. The basic hypotheses of the theory are given in the next section, which is followed by a section reviewing the supporting evidence for its several hypotheses taken individually or in groups. The hypotheses are illustrated graphically and algebraically in the next section. Following the illustrative section, there is a section describing the sample of 700 University of Guelph undergraduates on whom the theory was tested, and the methods used. Then there is a section reviewing general results and comparing these to some results of earlier studies, followed by a review of results for MDT and a discussion.

BASIC HYPOTHESES

The basic hypotheses of MDT are as follows:

H1: Reported net satisfaction is a function of perceived discrepancies between what one has and wants, relevant others have, the best one has had in the past, expected to have 3 years ago, expects to have after 5 years, deserves and needs.

H2: All perceived discrepancies, except that between what one has

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and wants, are functions of objectively measurable discrepancies, which also have direct effects on satisfaction and actions.

H3: The perceived discrepancy between what one has and wants is a mediating variable between all other perceived discrepancies and reported net satisfaction.

H4: The pursuit and maintenance of net satisfaction motivates human action in direct proportion to the perceived expected levels of net satisfaction.

H5: All discrepancies, satisfaction and actions are directly and indirectly affected by age, sex, education, ethnicity, income, self-esteem and social support.

H6: Objectively measurable discrepancies are functions of human action and conditioners.

SUPPORTING EVIDENCE

Since I have already written an extensive review of the literature related to MDT in Michalos (1985), I will not undertake that task again here. However, it will be worthwhile to briefly indicate the variety of insights from several well-known theories that are incorporated into MDT.

Although nobody has bound together as many hypotheses or articulated a theory of multiple discrepancies as systematically as I have here, a number of people have worked with two or more discrepancy hypotheses in conjunction. As I have mentioned in all my earlier publications, I originally followed Campbell, Converse and Rodgers (1976) and Andrews and Withey (1976) fairly directly. Crosby (1982) used several gap hypotheses in conjunction, and cited seven other people who had also used multiple discrepancies, namely, Davis (1959), Runciman (1966), Gurr (1970), Williams (1975), Berkowitz (1968), Adams (1965) and Patchen (1961). Goodman (1974) and Oldham, *et al.* (1982) should also be listed as labourers in the same vineyard.

H1 refers to seven different perceived discrepancies. The idea that net satisfaction is a function of the perceived discrepancy or gap between what one has and wants is at least as old as the stoic philosophy of Zeno of Citium around 300 B.C. In the form of aspiration theory, Lewin *et al.* (1944) gave the idea a new start. More recent confirmations of the basic hypothesis have been reported by Bledsoe, Mullen and Hobbes (1980); Canter and Rees (1982); Cherrington and England (1980); Campbell, Converse and Rodgers

(1976); Andrews and Withey (1976); Michalos (1980a, 1982a, 1983a); and Crosby (1976, 1982).

The idea that net satisfaction is a function of the perceived discrepancy between what one has and relevant others have can also be found before the birth of Jesus Christ, namely, in Aristotle's *Politics* in the fourth century B.C. In the form of reference group theory, Merton and Kitt (1950) gave the hypothesis a provocative new start. Recent confirmations have come from Oldham and Miller (1979); Appelgryn and Plug (1981); Hatfield and Huseman (1982); Duncan (1975); Campbell, Converse and Rodgers (1976); Andrews and Withey (1976); Crosby (1976, 1982); Oldham, *et al.* (1982); Goodman (1974); and Michalos (1980a, 1982a, 1983a). Wills (1981, 1983) considers this sort of theory (by its other popular name, "social comparison theory") from the point of view of its usefulness in explaining people's behaviour and attitudes regarding help-seeking decisions, self-evaluation and self-enhancement.

Confirmations of the hypothesis that net satisfaction is a function of the perceived gap between what one has now and the best one has ever had in the past have been reported by Campbell, Converse and Rodgers (1976) and Michalos (1980a, 1982a, 1983a). Suls and Sanders (1982) present evidence supporting a developmental model in which evaluations based on this sort of perceived discrepancy occur in children around the ages of 4 to 5, while "social comparisons with similar others" occur a bit later around the age of 9.

Equity theorists have found considerable support for the hypothesis that net satisfaction is a function of the perceived gap between what one has and what one deserves. For examples, see Hatfield, Greenberger, Traupman and Lambert (1982); Walster, Berscheid and Walster (1976); Adams and Freedman (1976); and Goodman and Friedman (1971). In ordinary English one may distinguish an equitable distribution in which each person gets whatever is due to him or her from an equal distribution in which each person gets the same as every other person. (See Michalos (1982b) for more on this). However, equity theorists usually ignore this distinction and define equitable relationships as those in which "all participants are receiving equal relative outcomes" (Walster, Berscheid and Walster, 1976, pp. 2, 7). Cook (1975, p. 376) took a third and more relativistic view, asserting that "a state of equity is said to exist if the actual allocation of outcomes coincides with p's beliefs about how they should be distributed... ."

The hypothesis that net satisfaction is a function of the perceived discrep-

ancy between what one has and expected to have was given a fairly systematic treatment by Festinger (1957). As indicated by several authors in Abelson *et al.* (1968), Festinger's theory of cognitive dissonance mixed several kinds of discrepancies together, although there was a tendency to emphasize the gap between expected and actual states of affairs. Support for this hypothesis has been reported by Campbell, Converse and Rodgers (1976); Weintraub (1980); Oliver (1980); Ross, Mirowski and Duff (1982); and many others cited in Abelson *et al.* (1968).

Person-environment fit theorists have hypothesized that, among other things, net satisfaction is a function of the perceived fit between what a person has (resources, abilities) and what a person needs. Considerable support for this hypothesis has been reported in excellent review articles by Harrison (1978, 1983) and Caplan (1979, 1983). Kurella (1979) and Booth, McNally and Berry (1979) have also reported support for a similar sort of hypothesis.

The seventh gap hypothesis incorporated into H1 involves the perceived discrepancy between what one has now and expects to have in the future (after five years). One would expect that optimism about the future would bring satisfaction, and there is some experimental evidence supporting this idea, e.g., Goodman (1966).

H1 refers to reported satisfaction because the survey research procedures used to test MDT rely on personal reports. Although I usually omit the word "reported", strictly speaking it is essential. Usually, I think, things are regarded and reported as satisfying if and only if on balance they are satisfying. So, typically, "satisfaction" has the force of "net satisfaction", and "dissatisfaction" has the force of "net dissatisfaction", Scales running from "very satisfied" to "very dissatisfied" presuppose that respondents are reporting net assessments.

H2 affirms ontological realist or objectivist assumptions, namely, that there is a world relatively independent of this or that person, containing things with more or less objectively measurable properties, which are more or less objectively comparable. (Festinger (1957) and Crosby (1982) emphasize a similar point.) For example, according to H2, the perceived discrepancy between what one earns and some relevant other person earns is to some extent a function of a real or objectively measurable discrepancy; the perceived discrepancies between needs for nourishment or warmth and their attainment are to some extent functions of real or objectively measurable

discrepancies; and so on. While I strongly suspect and there is some evidence that the mixture of objectively measurable and perceived discrepancies is a bit like a horse and rabbit stew, with perceived discrepancies represented by the horse, I will have little more to say on the matter here. The only exception to this realist assumption is in the case of perceived gaps between what one has and wants. In Michalos (1978) I gave a dispositional analysis of wanting which might allow one to distinguish objectively measurable from perceived wants. After performing many thought experiments on this view, I am still not persuaded that one could operationalize the two kinds of wanting in distinct ways. Moreover, I suspect that one could always regard dispositional wants as particularistic or adventitious needs as defined in Michalos (1978). If the latter is true, then it would be redundant to introduce objectively measurable wants as a partial determinant of perceived wants. These considerations led me to treat perceived wants as an exception in H2. H2 also affirms that objectively measurable discrepancies have a direct impact on net satisfaction and human action, as will become clearer shortly.

H3 is relatively straightforward, saying that the perceived gap between what one has and wants serves as a mediator between all other perceived gaps and net satisfaction. This hypothesis was confirmed by Campbell, Converse and Rodgers (1976) and Michalos (1980a, 1982a, 1983a). H1 and H3 taken together imply that perceived discrepancies have both direct and indirect (mediated) effects on reported net satisfaction. In Michalos 1980a, 1982a, 1983a, I compared two models, one with and one without a mediating variable, and I recommended the former. I was unable to see the obvious, namely, that a combination of the two models would provide a more accurate account of the dynamics of satisfaction than either model could provide separately. Here I have tried to articulate this insight.

H4 connects net satisfaction to human action in a fairly traditional utilitarian way. (For examples, see Kauder (1965), Luce and Raiffa (1957) Festinger (1957), Edwards and Tversky (1967), Kuhn (1974), and Harsanyi (1982).) The main difference between what is going on here and what has traditionally gone on in utilitarian discussions is that here we do not begin with utility, happiness, satisfaction or even preferences. From the crude utilitarianism of Shaftesbury (1711) to the most recent sophisticated utilitarianism of Harsanyi (1982), this view always begins with some sort of a given affect-laden attitude or interest, e.g., preferences. It is precisely this foundation, this given element in all utilitarian theories, that MDT is designed to break through and explain.

By the time H4 arrives on the scene, the most important innovative and explanatory work of MDT is virtually complete. At this point, one might go the way of a variety of utilitarians or naturalistic value theorists.

According to H5, discrepancies are directly and indirectly affected by certain demographic elements and/or conditioners. Although such elements have not been found to be relatively powerful predictors of satisfaction, they do have some impact. On average, perhaps as much as 10% of the variance in reported net satisfaction can be explained by demographic variables. Generally speaking, the best and most recent literature reviews regarding the impact of demographic elements on satisfaction and happiness are in Diener (1984) and Veenhoven (1984). Examples of studies showing that age, sex, education, ethnicity and income have an impact on satisfaction and/or happiness include Campbell, Converse and Rodgers (1976); and Andrews and Withey (1976). A variety of researchers have found one or more of these variables related to satisfaction with life as a whole or to satisfaction with some domain of life. For example, Weaver (1980) found job satisfaction and age positively associated; Rhyne (1981) and Glenn (1981) found that sex had a differential affect on marital satisfaction. Barnett and Nietzel (1979) reported that personal self-esteem had an impact on marital satisfaction, and Diener (1984, p. 558) cited eleven studies indicating that "high self-esteem is one of the strongest predictors of [subjective well-being]". The importance of a variety of species of social support, measured in a variety of ways, is thoroughly documented in excellent articles by Caplan (1979); Turner, Frankel and Levin (1983); Abbey and Andrews (1985); and Gottlieb (1984). La Rocco, House and French (1980) review several studies and provide a careful analysis of data on the moderating effects of social support on job strain (dissatisfaction). Their conclusion is that social support has greater direct than indirect effects.

The point of H6 is primarily to indicate that human action, including especially one's own, has a direct effect on the objectively measurable discrepancies of one's life, as do the previously mentioned demographic and/or conditioning elements. It is assumed, of course, that there is some time lag and directionality involved, and that events and actions are not their own causes or motives.

The basic hypotheses of MDT refer to functions without specifying them as linear or nonlinear. Equity theorists (e.g., Walster, Berscheid and Walster, 1976) and person-environment fit theorists (e.g., Harrison, 1978, 1983) have

tended to predict and find U-shaped relationships between reported net satisfaction and their independent variables. There is evidence that people who get more or less than they think they deserve are dissatisfied, with those who get more being less dissatisfied than those who get less. There is also some evidence that people in a work environment that is too complex or too simple for their particular needs or wants are relatively less satisfied than people whose work environment fits their needs or wants fairly closely. At this point, we don't know if U-shaped relationships obtain between perceived discrepancies between what one has and deserves, and has and needs on the one hand, and what one has and wants on the other. It strikes me as likely that human agents alter their wants (wittingly or not) so as to maintain a minimum level of net satisfaction, which is essentially what aspiration theorists have always said. So, rather than expecting a nonlinear relationship between the perceived gap between what one has and wants and the other gaps, I would expect internal adjustments to be made that would tend to keep the relationship linear.

HYPOTHESES ILLUSTRATED

Exhibit 1 illustrates the relationships postulated in the basic hypotheses. In this Exhibit, capital letters stand for items in boxes (e.g., A stands for objectively measurable discrepancies) and numbers following letters stand for paths connecting items in boxes (e.g., A1 stands for the path connecting objectively measurable discrepancies to perceived discrepancies). Thus, our basic hypotheses H1-H6 yield the following derived hypotheses expressed in terms of Exhibit 1.

DH1. Objectively measurable discrepancies (A) are a function of an agent's own action along the path E1 and conditioners along the path F1. Briefly, this may be expressed

$A = f(E1, F1)$ (From H6)

DH2. Perceived discrepancies (B) are a function of objectively measurable discrepancies along the path A1 and the conditioners along the path F2. Briefly, this is

$B = f(A1, F2)$ (From H2, 5)

DH3. The perceived discrepancy between what one has and wants (C) is a function of all other perceived discrepancies along the path

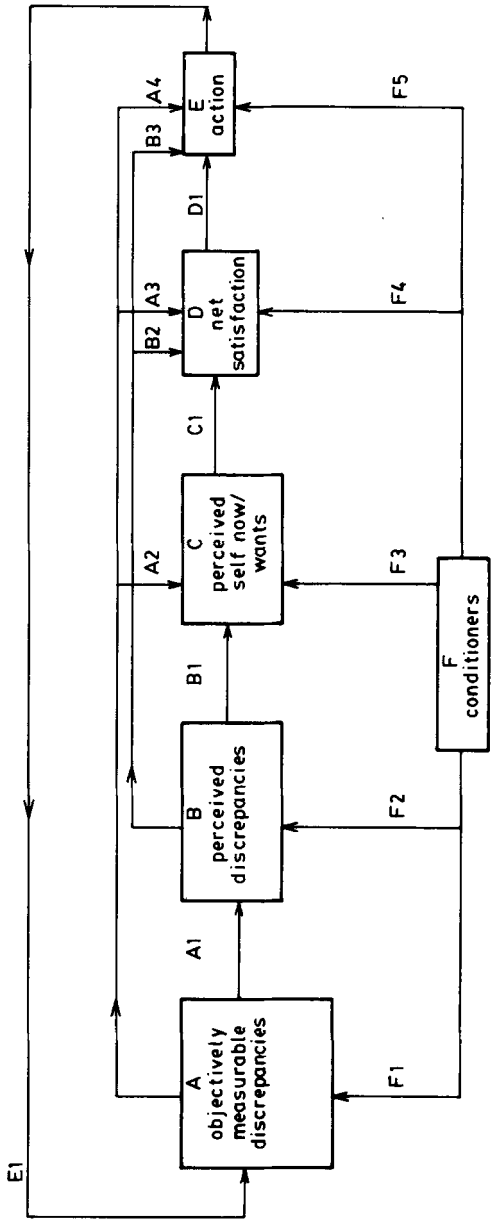

EXHIBIT 1
Multiple Discrepancies Theory

B1, objectively measurable discrepancies along the path A2, and the conditioners along the path F3. Briefly,
C = f (B1, A2, F3) (From H1, 3, 5)

DH4. Reported net satisfaction (D) is a function of the perceived discrepancy between what one has and wants along the path C1, objectively measurable discrepancies along the path A3, all other perceived discrepancies directly along the path B2, and the conditioners along the path F4. Briefly,
D = f (C1, A3, B2, F4) (From H1, 3, 5)

DH5. An agent's action (E) is a function of reported net satisfaction along the path D1, objectively measurable discrepancies along the path A4, all other perceived discrepancies directly along the path B3, and the conditioners along the path F5. Briefly,
E = f (D1, A4, B3, F5) (From H2, 4, 5)

The general idea expressed in H4 is that people tend to try to maximize net satisfaction. DH5 provides a bit more information about the sources of resources and restrictions that help and hinder people from achieving their aims. Exactly which aspect of an agent's situation will become the focus of attention depends on the perceived relative expected net satisfaction attached to action directed to that aspect. For example, if one perceives greater expected net satisfaction connected to action designed to alter objectively measurable conditions of one's life rather than to action designed to alter one's own desires, one would tend to perform the former rather than the latter. Thus, if it is likely to be more satisfying to earn more money relative to one's peers than to try to want fewer material goods, one would tend to pursue a course of action designed to earn more money. If the prospects for closing the income gap between relevant others and oneself are practically hopeless, one would tend to focus on a more profitable course of action, such as trying to limit one's own desires. (Compare Corollaries IV.1 and 1.2 in Walster, Berscheid and Walster (1976), and Festinger (1957, pp. 6, 31 and 182).)

DH5 provides a number of potential avenues of intervention for those interested in altering people's net satisfaction. By noticing the relative impact (statistically, the beta value) of each relevant variable on net satisfaction, one can identify the place to intervene to get the biggest bang for one's buck.

For example, if it turns out that, say, perceived social comparisons have relatively less impact on net satisfaction than perceived inequities, then one might be wise to focus one's interventions on altering the latter rather than the former.

Exhibit 2 illustrates in greater detail the central core of relationships expressed in Exhibit 1, ignoring all references to objectively measurable discrepancies. In Exhibit 2, each perceived discrepancy in box B has an abbreviation, namely Ba for "the perceived discrepancy between what one has now and relevant others have", Bb for "the perceived discrepancy between what one has now and the best one has had in the past", and so on to Bf. Similarly, each conditioner in box F has an abbreviation, namely, Fa for "age", Fb for "sex", and so on to Fg. The path labeled B1 in Exhibit 1 is unpacked into its six constituents B1a–B1f in Exhibit 2. To keep the Exhibit relatively simple, the seven items in box F are not unpacked. Strictly speaking, as will be shown below, every path labeled with an F should be unpacked into seven constituents labeled, for example, F4a, F4b and so on. Thus, the derived hypotheses DH3 and DH4 yield the following expanded derived hypotheses expressed in terms of Exhibit 2.

EDH3. C = f (B1a ... B1f, F3a ... F3g)

EDH3 says that the perceived discrepancy between what one has and wants is a function of 6 other perceived discrepancies and 7 conditioners. Exactly how many and which of the elements of EDH3 will survive empirical testing is at present unknown. Much of what is known about these elements was briefly reviewed above and in Michalos 1980a, 1982a, 1983a, 1985.

From DH4, one may derive the following expanded derived hypothesis in terms of Exhibit 2.

EDH4. D = f (C1, B2a ... B2f, F3a ... F3g, F4a ... F4g)

EDH4 says that reported net satisfaction is a function directly of 7 perceived discrepancies, indirectly of 6 of these mediated by the discrepancy between what one has and wants, and directly and indirectly of age, sex, education, ethnicity, income, self-esteem and social support. Exhibit 2 and EDH4 are alternative representations of the perceptual core of MDT that will be our primary focus of attention in following sections.

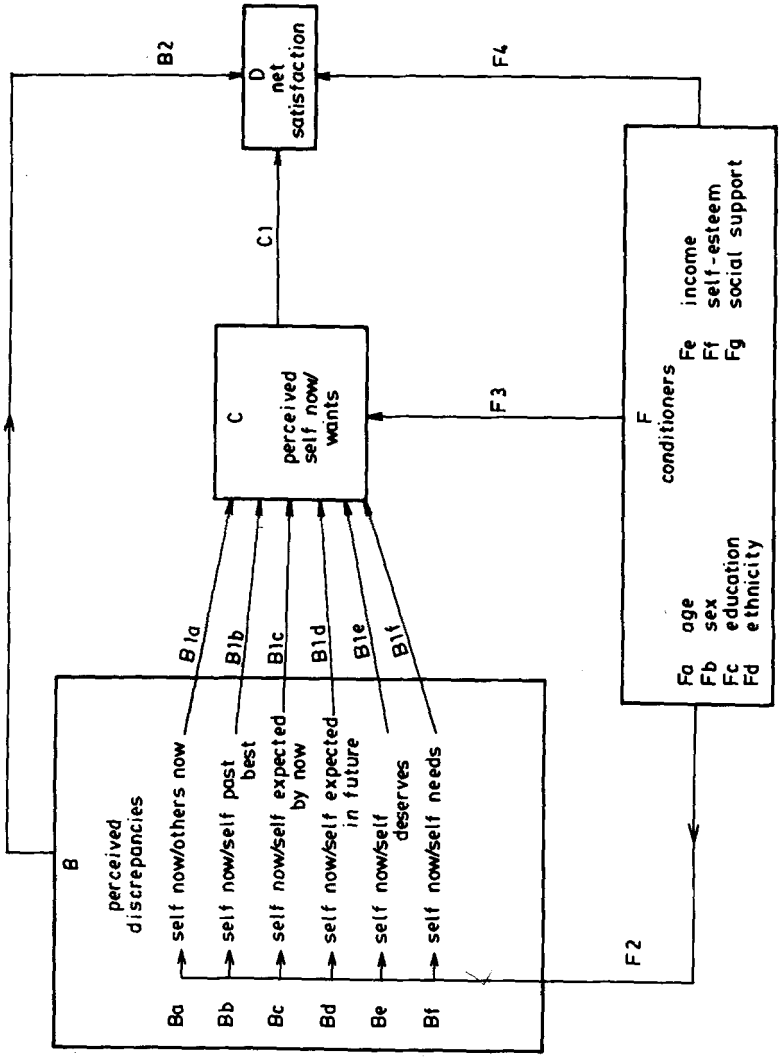

EXHIBIT 2
Perceptual Core of MDT

SAMPLE AND METHODS

In order to test the current version of MDT articulated in the previous sections, a convenience sample of 700 University of Guelph undergraduates was drawn from the 3130 students enrolled in the 1984 summer term (May and June). The composition of the sample is described in Exhibit 3. Briefly, of the 683 usable questionnaires obtained, 54% came from females, 70% from students aged 20 to 25, 84% from single people, 76% had 3 years or less of university, and 51% were majoring in biological or social sciences. Official registration statistics indicated that in the total enrollment there were 57% females, 71% aged 20 to 25, 85% single, and 78% had 3 years or less of university. So the sample was in fact fairly representative of the student body that term.

EXHIBIT 3

Sample composition

Sex	*N*	%
Males	314	46
Females	368	54
Total	682	100

Age	*N*	%
17 to 19	60	9
20 to 22	345	50
23 to 25	135	20
26 to 30	75	11
31 to 35	34	5
36 and up	33	5
Total	682	100

Marital Status	*N*	%
Single	571	84.0
Married	83	12.0
Widowed	1	0.1
Separated	15	2.0
Divorced	12	1.9
Total	682	100.0

Work status	*N*	%
Unemployed	471	69
Employed 10 hrs.	68	10
Employed 20 hrs.	55	8
Employed 30 hrs.	34	5
Employed 40 hrs.	54	8
Total	682	100

Formal education	*N*	%
1 year or less	150	22
2 years	177	26
3 years	191	28
4 years	89	13
5 years	14	2
Diploma/degree	61	9
Total	682	100

Major studies	*N*	%
General	57	8
Natural sciences	30	4
Biological sciences	161	24
Social Sciences	182	27
Humanities	24	3
Engineering	21	3
Commerce	35	5
Other	172	26
Total	682	100

The questionnaire was an extended version of those described in Michalos 1980a, 1982a, and 1983a. It had a demographic page with 7 questions yielding the information in Exhibit 3, an instruction page, a page defining the terms designating the 12 domains (Appendix B), and 8 pages containing items involving the assessment of domain and global satisfaction from 8 different perspectives. A 7-point Likert-type scale was provided on each of these pages to obtain data relevant to the 7 discrepancies mentioned in H1 of MDT and to the basic satisfaction ratings. An off-scale category was available in every case to allow people to opt out by checking 'No opinion'.

Basic satisfaction ratings were taken on my revised delightful–terrible scale. For example, the global item asked "How do you feel about your life as a whole right now?" and the response categories ran from "terrible" (= 1 point), through "mixed dissatisfying and satisfying" (= 4) to "delightful" (= 7).

Assessments of the discrepancies between what one has and wants were obtained in the next battery of questions. For example, the global item asked "Consider your life as a whole. How does it measure up to your general aspirations or what you want?" and the response categories ran from "not at all" (= 1), through "half as well as what you want" (= 4) to "matches or is better than what you want" (= 7).

Assessments of the discrepancies between what one has and relevant others have were obtained next. The global item asked "Consider your life as a whole. How does it measure up to the average for most people your own age in this area?" and the response categories ran from "far below average" (= 1), through "average" (= 4) to "far above average" (= 7).

Assessments of the discrepancies between what one has and deserves were next. The global item asked "Consider your life as a whole. How does it measure up to the life you think you deserve?" and the responses ran from "far below what is deserved" (= 1), through "matches exactly what is deserved" (= 4) to "far above what is deserved" (= 7).

Assessments of the discrepancies between what one has and needs were next. The global item asked "Consider your life as a whole. How does it measure up to what you think you need?" and the responses ran from "far below what is needed" (= 1), through "matches exactly what is needed" (= 4) to "far above what is needed" (= 7).

Assessments of the discrepancies between what one has and expected to have 3 years ago at this point in life were next. The basic question was briefly

"Compared to what you expected to have, does your life offer extremely less (= 1), about what you expected (= 4) or extremely more (= 7)?"

Assessments of the discrepancies between what one has and expects to have 5 years in the future were next. Unfortunately, the question was worded ambiguously.[1] Preceding the list of 12 domains, it was asked "... consider how you would rate your own life, as it is at present, in comparison to what you expect it will be five years from now. Do you expect it [later] to offer extremely less, much more, etc.?" The reference point of this question is life 5 years from now. However, the global item asked "Now, using the same scale, consider your life as a whole. How does it [now] measure up to what you expect five years from now?" The reference point of this question is life as it is now. If respondents noticed the difference, then their responses to the global item should have been roughly opposite to their domain item responses. In fact, the mean of the mean responses to the 12 domain items was 4.5 and the mean response to the global item was 4.4 (Exhibit 4), indicating that respondents apparently asnwered the thirteenth item on the page from the same point of view that they answered the other 12. Thus, although these 13 questions were consistently answered from the same reference point, this distant point differed from the current reference point used in all the other discrepancy items.

Assessments of the discrepancies between what one has and the best one has ever had in the past were next. The global item asked "Consider your life as a whole. How does it measure up to the best in your previous experience?" and the responses ran from "far below the previous best" (= 1), through "matches the previous best" (= 4) to "far above the previous best" (= 7).

Assessments of happiness with life as a whole were based on the question "Considering your life as a whole, would you describe it as very unhappy (= 1), unhappy (= 2 or 3), mixed (= 4), happy (= 5 or 6), or very happy (= 7)?"

The conditioners measured directly included age, sex and education. Self-esteem was measured indirectly using the domain satisfaction score, and social support was also measured indirectly using the mean of the satisfaction scores for family relations and friendships. I assumed that perceived self-esteem and perceived satisfaction with self-esteem would be highly correlated, and that if one had relatively satisfying relations with friends and family, then one had relatively good social support. Both of these assumptions are being tested with field studies now in progress, although they already have

some support in the literature; e.g., see Turner, Frankel and Levin (1983) and Wills (1983). Instead of collecting data on incomes, which I suspected would be similar for most students or misleading as a result of scholarships, grants or bursaries, average length of weekly employment time was measured. In Canada, if not everywhere else, it is not likely that full-time students take on part-time paid employment unless they have financial problems. So the time invested in such employment might be a reasonable indirect measure of economic status. Ethnicity was not measured in this survey.

GENERAL RESULTS

Exhibit 4 summarizes the results from the 8 batteries of substantive questions. The third row from the bottom gives the means of the domain mean scores for the 8 sets of scores. The ratings on the delightful-terrible scale had the highest mean, 4.9. Life as a whole had a mean score of 5 on this scale,

EXHIBIT 4

Mean scores

	A Self now	B Self wants	C Self others	D Self deserved	E Self needs	F Self progress	G Self future	H Self best	Mean B–H
Health	5.3	5.3	4.7	4.1	3.8	3.9	4.3	3.5	4.2
Financial security	4.2	3.8	4.1	3.7	3.2	3.7	4.6	3.4	3.8
Family relations	5.2	5.3	4.9	4.2	3.9	4.2	4.3	4.1	4.4
Paid employment	3.7	2.9	3.3	3.1	2.7	3.2	4.7	2.8	3.2
Friendships	5.2	5.2	4.7	4.1	3.8	4.2	4.4	4.0	4.3
Housing	5.1	4.7	4.5	4.0	3.9	4.1	4.5	3.7	4.2
Area lived in	5.1	4.9	4.6	4.1	4.0	4.1	4.5	3.7	4.3
Recreation	4.9	4.8	4.4	3.8	3.6	3.9	4.4	3.6	4.1
Religion	4.8	4.9	4.5	4.1	3.7	4.1	4.3	3.8	4.2
Self-esteem	5.1	5.1	4.7	3.9	3.7	4.2	4.6	4.2	4.3
Transportation	4.7	4.5	4.2	3.8	3.6	3.9	4.5	3.6	4.0
Education	5.1	5.1	5.0	4.1	3.8	4.5	4.8	4.8	4.6
Mean	4.9	4.7	4.7	3.9	3.6	4.0	4.5	3.8	4.2/4.1
Whole life	5.0	4.9	4.8	4.0	3.7	4.2	4.4	4.1	4.3
Happiness	5.0								

which was exactly the same as the score for happiness with life as a whole. The Pearson correlation of these two global items was $r = 0.67$ ($P \leqslant 0.001$). The gap between what one has and needs was generally perceived as the greatest of the 7. It had a mean of 3.6 for the 12 domains and 3.7 for life as a whole. The discrepancies between what one has and wants, and what one has and relevant others have yielded the same means, 4.7. These were the highest means for the 7. On average, there was a difference of 0.15 between the mean of the mean domain scores and its corresponding global mean.

For the 12 domains, satisfaction with health had the highest mean, 5.3, and satisfaction with paid employment had the lowest mean, 3.7. For university undergraduates, these are quite reasonable results. Considering the means of mean domain discrepancy scores (in the extreme righthand column), it is

EXHIBIT 5

Multiple regression of global scores on domain scores

	Self wants	Self others	Self deserved	Self needs	Self progress	Self future	Self best
Percent of variance explained[a]	53 N=315	53 N=326	58 N=294	58 N=315	50 N=327	55 N=380	54 N=329
Predictors	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*
Health	0.105[d]	0.130[b]	e	e	0.099[d]	e	0.150[a]
Financial security	0.212[a]	0.186[a]	0.170[a]	0.233[a]	0.196[a]	0.173[b]	0.097[d]
Family relations	e	e	0.128[b]	e	e	0.111[c]	0.083[d]
Paid employment	e	e	0.100[d]	e	e	e	e
Friendships	0.189[a]	0.144[a]	0.112[c]	0.156[a]	0.176[a]	e	0.189[a]
Housing	0.195[a]	0.143[a]	e	e	e	e	e
Area lived in	e	e	0.205[a]	0.208[a]	0.094[d]	e	0.154[a]
Recreation	0.108[d]	e	0.142[a]	0.130[b]	0.138[b]	0.123[c]	e
Religion	e	0.082[d]	0.093[d]	e	e	0.095[d]	e
Self-Esteem	0.191[a]	0.266[a]	0.209[a]	0.243[a]	0.193[a]	0.167[a]	0.323[a]
Transportation	e	0.123[b]	e	e	e	0.126[d]	0.085[d]
Education	0.208[a]	0.260[a]	0.159[a]	0.249[a]	0.261[a]	0.186[a]	0.241[a]

[a] $P \leqslant 0.001$
[b] $P \leqslant 0.005$
[c] $P \leqslant 0.01$
[d] $P \leqslant 0.05$
[e] Significance level too low to enter equation.

clear that on average respondents' current university education tended to provide the smallest discrepancies. The mean of means for the 7 scales was 4.6. Again, on average it was paid employment that yielded the greatest discrepancy, 3.2.

Exhibits 5, 6, and 7 show the relative impact of domain scores on global scores for the 7 sorts of discrepancies. Exhibit 5 shows that for 3 types of discrepancies (self-others, self-deserved and self-best), the domain of self-esteem has the greatest impact on its corresponding global discrepancy score, and for 3 others (self-needs, self-progress and self-future) the domain of education has the greatest impact. For the self-wants discrepancy, the domain of financial security has the greatest impact on the global score. Only 3 of 12 domains have a significant impact on all of the 7 global discrepancy

EXHIBIT 6

Multiple regression of global scores on domain scores: Males

	Self wants	Self others	Self deserved	Self needs	Self progress	Self future	Self best
Percent of variance explained[a]	52 *Nñ140*	54 *N*=146	59 *N*=133	53 *N*=140	58 *N*=146	48 *N*=165	57 *N*=145
Predictors	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*
Health	0.211[b]	0.122[d]	0.131[d]	e	0.164[c]	e	0.228[a]
Financial security	0.210[b]	0.246[a]	0.289[a]	0.243[a]	0.239[a]	e	0.188[a]
Family relations	e	e	e	e	e	e	e
Paid employment	e	e	e	e	e	e	e
Friendships	0.188[c]	0.132[d]	0.142[d]	0.175[c]	0.211[a]	e	e
Housing	0.218[a]	0.183[c]	e	e	e	0.261[a]	e
Area lived in	e	e	0.262[a]	0.242[a]	e	e	0.150[c]
Recreation	e	e	0.131[d]	e	e	e	e
Religion	e	e	e	e	e	0.128[d]	e
Self-Esteem	0.158[d]	0.246[a]	0.239[a]	0.255[a]	0.258[a]	0.273[a]	0.468[a]
Transportation	e	e	e	e	e	e	e
Education	0.228[a]	0.296[a]	e	0.268[a]	0.306[a]	0.216[b]	0.265[a]

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
[e] Significance level too low to enter equation.

EXHIBIT 7

Multiple regression of global scores on domain scores: Females

	Self wants	Self others	Self deserved	Self needs	Self progress	Self future	Self best
Percent of variance explained[a]	55 N=170	49 N=175	56 N=152	62 N=170	47 N=176	60 N=176	54 N=179
Predictors	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*	*Beta*
Health	e	e	e	0.119[d]	e	e	e
Financial security	0.221[a]	0.205[a]	e	0.146[b]	0.154[c]	0.192[c]	e
Family relations	e	e	0.206[a]	e	0.124[d]	0.139[c]	0.113[d]
Paid employment	e	e	0.159[b]	0.136[d]	e	e	e
Friendships	0.177[b]	0.156[c]	0.140[d]	0.165[b]	0.130[d]	e	0.237[a]
Housing	0.161[c]	e	e	e	e	e	e
Area lived in	e	0.156[c]	0.187[b]	0.172[a]	0.126[d]	e	0.182[a]
Recreation	0.149[d]	0.169[c]	0.124[d]	0.121[d]	0.165[c]	0.196[a]	e
Religion	0.128[d]	e	0.163[b]	e	0.186[b]	e	0.180[b]
Self-Esteem	0.197[b]	0.277[a]	0.178[b]	0.208[a]	0.125[d]	0.163[c]	0.256[a]
Transportation	e	e	e	e	e	0.155[d]	0.123[d]
Education	0.188[b]	0.237[a]	0.266[a]	0.228[a]	0.234[a]	0.145[b]	0.205[a]

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
[e] Significance level too low to enter equation.

scores, financial security, self-esteem and education.

Exhibits 6 and 7 show that males and females had slightly different profiles of domain impacts on global discrepancies. For both groups, only the domain of self-esteem had an impact on all of the 7 global discrepancy scores. However, males had on average 5.3 domains with significant impacts on their global discrepancy scores, while females averaged 7.1. That seems to indicate that female global discrepancy scores have a broader base than their male counterparts. In total figures, 37 (44%) of 84 possible domain gaps had significant impacts on corresponding global gaps for makes while 50 (60%) had significant impacts for females.

Exhibit 8 gives the results of regressing global satisfaction on 12 domains

and 6 demographic variables. The most striking feature of the three regressions (for the whole group, males and females) is the relative insignificance of the demographic variables. As indicated earlier, most studies have found such variables to have relatively little impact on global satisfaction. Our program (*SPSS*) would not allow variables to enter regression equations unless they yielded values with a statistical significance level of 0.05, and that criterion was rigorous enough to keep out all the demographic variables. Presumably, the relatively homogeneous demographics of this sample of university under-

EXHIBIT 8

Multiple regression of satisfaction with life as a whole on satisfaction with 12 domains and 6 demographic variables

	Whole group	Males	Females
Percent of variance explained[a]	53 (N=296)	46 (N=140)	54 (N=149)
Predictors *Satisfaction with:*	*Beta*	*Beta*	*Beta*
Health	0.117[c]	e	e
Financial security	0.112[c]	0.179[b]	0.154[c]
Family relations	0.133[b]	e	0.142[d]
Paid employment	0.092[d]	e	e
Friendships	0.172[a]	0.235[a]	0.204[b]
Housing	0.121[b]	e	e
Area lived in	e	e	e
Recreation	0.122[c]	0.163[d]	0.143[d]
Religion	e	e	0.160[c]
Self-Esteem	0.308[a]	0.344[a]	0.290[a]
Transportation	e	e	e
Education	0.160[a]	0.208[b]	0.173[b]
Demographic variables			
Sex	e	–	–
Age	e	e	e
Marital status	e	e	e
Work status	e	e	e
Education level	e	e	e
Course of study	e	e	e

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
[e] Significance level too low to enter equation.

graduates was largely responsible for these variables having no distinctive explanatory power. Satisfaction in 2 domains had no impact on global satisfaction, namely, the area lived in and transportation. Satisfaction with self-esteem had the greatest relative impact on global satisfaction for all three groups, and satisfaction with friendships was second. Satisfaction with religion and family relations had no impact on global satisfaction for males, but some impact for females. Fifty-three percent of the variance in global satisfaction was explained by satisfaction in 9 domains for the whole group. For males,

EXHIBIT 9

Multiple regression of happiness with life as a whole on satisfaction with 12 domains and 6 demographic variables

	Whole group	Males	Females
Percent of variance explained[a]	39 (N=296)	33 (N=140)	43 (N=149)
Predictors	*Beta*	*Beta*	*Beta*
Satisfaction with:			
Health	0.168[a]	0.173[d]	0.189[b]
Financial security	e	e	e
Family relations	0.141[b]	e	0.174[c]
Paid employment	0.180[a]	0.231[a]	0.137[d]
Friendships	0.212[a]	0.242[a]	0.230[a]
Housing	e	e	e
Area lived in	e	e	e
Recreation	e	e	e
Religion	e	e	e
Self-Esteem	0.255[a]	0.290[a]	0.249[a]
Transportation	e	e	e
Education	0.123[c]	e	0.142[d]
Demographic variables			
Sex	e	–	–
Age	e	e	e
Marital status	e	e	e
Work status	e	e	e
Education level	e	e	e
Course of study	e	e	e

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
[e] Significance level too low to enter equation.

46% was explained by satisfaction in 5 domains and for females, 54% was explained by satisfaction in 7 domains. Again, therefore, the global satisfaction of females was influenced by more domains than that of males.

Exhibit 9 gives the results of regressing global happiness on 12 domains and 6 demographic variables. Again, the latter had no significant impact on happiness. Satisfaction in 6 domains had no impact on happiness, namely, the area lived in, transportation, religion, recreation, housing and financial security. Again, satisfaction with self-esteem had the greatest relative impact on happiness, and satisfaction with friendships was second. Satisfaction with

EXHIBIT 10

Comparison of satisfaction regressions for University Clerical Staff, Rural Seniors, Northern Community and Guelph Students

	1979 Clerical Staff	1981 Rural Seniors	1982 Northern Community	1984 Guelph University Undergraduates
Percent of variance explained in satisfaction with life as a whole[a]	57 (N=312)	49 (N=273)	53 (N=328)	53 (N=296)
Predictors Satisfaction with:	*Beta*	*Beta*	*Beta*	*Beta*
Health	0.107	0.180(2)	0.169(3)	0.117
Financial security	0.152(3)[d]	−0.011	0.242(1)	0.112
Family relations	0.348(1)	0.102	0.101	0.133
Paid employment	0.100	[c]	[b]	0.092
Friendships	0.195(2)	0.080	0.068	0.172(2)
Housing	−0.049	0.207(1)	0.095	0.121
Area lived in	[b]	0.010	0.133	[b]
Recreation	0.083	0.077	0.052	0.122
Religion	[c]	0.134	0.065	[b]
Self-Esteem	0.131	0.174(3)	0.192(2)	0.308(1)
Transportation	0.088	0.046	0.059	[b]
Government services	[c]	0.134	0.042	[c]
Spouse	[c]	0.057	[c]	[c]
Education	−0.026	[c]	[c]	0.160(3)

[a] $P \leq 0.001$
[b] Significance level too low to enter equation.
[c] Not in equation.
[d] Numbers in parentheses indicate the variable's rank of influence.

family relations and education had no impact on happiness for males, but some impact for females. Thirty-nine percent of the variance in happiness was explained by satisfaction in 6 domains for the whole group. For males, 33% was explained by satisfaction in 4 domains and for females, 43% was explained by satisfaction in 6 domains. Again, therefore, female happiness was influenced by more domains than that of males.

Exhibits 10 and 11 provide comparisons between this sample of university students and three previous samples described in Michalos 1980a, 1982a, and

EXHIBIT 11

Comparison of hapiness regressions for University Clerical Staff, Rural Seniors, Northern Community and Guelph Students

	1979 Clerical Staff	1981 Rural Seniors	1982 Northern Community	1984 Guelph University Undergraduates
Percent of variance explained in happiness with life as a whole[a]	45 (N=312)	32 (N=273)	36 (N=328)	39 (N=296)
Predictors Satisfaction with:	*Beta*	*Beta*	*Beta*	*Beta*
Health	0.121(3)	0.116(3)	0.181(2)	0.168
Financial security	0.092	0.057	0.211(1)	[b]
Family relations	0.384(1)	−0.028	0.090	0.141
Paid employment	0.033	[c]	0.092	0.180(3)
Friendships	0.225(2)	0.228(2)	0.011	0.212(2)
Housing	0.005	−0.010	0.095	[b]
Area lived in	[b]	0.014	0.048	[b]
Recreation	0.027	0.035	0.049	[b]
Religion	[c]	0.012	0.026	[b]
Self-Esteem	0.070	0.086	0.144(3)	0.255(1)
Transportation	0.050	0.046	[b]	[b]
Government services	[c]	0.080	0.033	[c]
Spouse	[c]	0.298(1)	[c]	[c]
Education	−0.033	[c]	[c]	[c]
Secure from crime	−0.048	[c]	[c]	0.123

[a] $P < 0.001$

[b] Significance level too low to enter equation.

[c] Not in equation.

[d] Numbers in parentheses indicate the variable's rank order of influence.

1983a. The first involved members of the University of Guelph's office and clerical staff, the second involved rural senior citizens in Huron County, Ontario, and the third involved all residents 18 years and older in the Northern Ontario community of Cochrane. Both exhibits show that the predictive power of domain satisfaction scores for global satisfaction and happiness is fairly stable across the 4 samples. Typically domain satisfaction scores can account for a bit over half the variance in global satisfaction scores, and a bit over a third of the variance in happiness scores. Exhibit 10 shows that satisfaction with self-esteem is the only variable to appear in the top 3 predictors of global satisfaction for 3 of the 4 samples. Exhibit 11 shows that satisfaction with friendships and health appear in the top 3 predictors of happiness for 3 of the 4 samples.

RESULTS FOR MDT

Exhibits 12 and 13 provide overviews of the success of MDT in its application to the undergraduate data-set. In these exhibits a successful prediction is understood as a predicted path coefficient with a (beta) value *and* a significance level of at least 0.05. This dual standard is a conservative combination of fairly common practice (Reis, 1982) and a proposal by Land (1969). A successful prediction ratio (ratio of successful to total predictions) may be used as one measure of a theory's adequacy, although it is certainly not the only or, perhaps, even the most important measure.

There were 771 successful out of a total of 2184 predictions, for a success rate of 35% (Exhibit 12). Only 528 of all these predictions involved the direct or indirect effects of perceived discrepancies, and these yielded 289 successes for a 55% rate of success. By "direct effects of perceived discrepancies" I mean predictions of satisfaction or happiness from perceived discrepancies, and by "indirect effects" I mean predictions of the gap between what one has and wants from the other six discrepancies. Sixty-two percent of the predicted indirect effects were successful, compared to 49% of the direct effects. The highest success rates were obtained for the two global variables, happiness (54%) and satisfaction with life as a whole (49%). The average domain satisfaction success rate was 34%, including a maximum of 37% for self-esteem and a minimum of 29% for education.

Successful prediction ratios provide a minimum measure of a theory's adequacy. A more substantial measure is provided by a theory's explanatory

EXHIBIT 12

Summary of prediction success rates, by dependent variables

	Whole group	Males	Females	Total
All effects				
N successes	305	225	241	771
N predictions	798	693	693	2184
Success rate (%)	38	33	35	35
All gap effects				
N successes	105	91	93	289
N predictions	176	176	176	528
Success rate (%)	60	52	53	55
Direct gap effects				
N successes	49	47	47	143
N predictions	98	98	98	294
Success rate (%)	50	48	48	49
Indirect gap effects				
N successes	56	44	46	146
N predictions	78	78	78	234
Success rate (%)	72	56	59	62
All effects by domains				
Happiness				
N successes	7	6	7	20
N predictions	13	12	12	37
Success rate (%)	54	50	58	54
% Var. exp.	49	45	53	
Global satisfaction				
N successes	32	25	24	81
N predictions	61	53	53	167
Success rate (%)	53	47	45	49
% Var. exp.	53	50	56	
Health satisfaction				
N successes	22	18	17	57
N predictions	61	53	53	167
Success rate (%)	36	34	32	34
% Var. exp.	50	46	53	
Financial security sat.				
N successes	21	19	20	60
N predictions	61	53	53	167
Success rate (%)	34	36	38	36
% Var. exp.	58	59	59	
Family relations sat.				
N successes	24	17	18	59
N predictions	61	53	53	167
Success rate (%)	39	32	34	35
% Var. exp.	79	77	81	

Exhibit 12 (continued)

	Whole group	Males	Females	Total
Paid employment sat.				
N successes	25	12	23	60
N predictions	61	53	53	167
Success rate (%)	41	23	43	36
% Var. exp.	59	55	68	
Friendships sat.				
N successes	21	17	19	57
N predictions	61	53	53	167
Success rate (%)	34	32	36	34
% Var. exp.	75	76	74	
Housing sat.				
N successes	24	18	16	58
N predictions	61	53	53	167
Success rate (%)	39	34	30	35
% Var. exp.	44	46	44	
Area sat.				
N successes	23	17	14	54
N predictions	61	53	53	167
Success rate (%)	38	32	26	32
% Var. exp.	48	49	46	
Recreation sat.				
N successes	21	14	19	54
N predictions	61	53	53	167
Success rate (%)	34	26	36	32
% Var. exp.	56	53	58	
Religion sat.				
N successes	21	13	17	51
N predictions	61	53	53	167
Success rate (%)	34	25	32	31
% Var. exp.	62	70	58	
Self-esteem sat.				
N successes	20	15	18	53
N predictions	53	45	45	143
Success rate (%)	38	33	40	37
% Var. exp.	58	54	61	
Transportation sat.				
N successes	24	20	15	59
N predictions	61	53	53	167
Success rate (%)	39	38	28	35
% Var. exp.	55	52	57	
Education sat.				
N successes	20	14	14	48
N predictions	61	53	53	167
Success rate (%)	33	26	26	29
% Var. exp.	35	34	37	

EXHIBIT 13

Prediction success rates, by predictors

Predictors	Whole group	Males	Females	Total	Direct	Indirect
Self-Wants						
N successes	14	14	14	42	42	0
N predictions	14	14	14	42	42	0
Rate (%)	100	100	100	100	100	0
Self-Others						
N successes	27	27	26	80	41	39
N predictions	27	27	27	81	42	39
Rate (%)	100	100	96	99	98	100
Self-Deserved						
N successes	16	9	13	38	17	21
N predictions	27	27	27	81	42	39
Rate (%)	59	33	48	47	40	54
Self-Needs						
N successes	17	15	18	50	13	37
N predictions	27	27	27	81	42	39
Rate (%)	63	56	67	62	31	95
Self-Progress						
N successes	9	8	9	26	10	16
N predictions	27	27	27	81	42	39
Rate (%)	33	30	33	32	24	41
Self-Future						
N successes	3	6	3	12	5	7
N predictions	27	27	27	81	42	39
Rate (%)	11	22	11	15	12	18
Self-Best						
N successes	19	12	12	43	16	27
N predictions	27	27	27	81	42	39
Rate (%)	70	44	44	53	38	69
Sex						
N successes	20	–	–	20	1	19
N predictions	105	–	–	105	14	91
Rate (%)	19			19	7	21
Age						
N successes	36	26	29	91	5	86
N predictions	105	105	105	315	42	273
Rate (%)	34	25	28	29	12	32
Work status						
N successes	27	25	17	69	6	63
N predictions	105	105	105	315	42	273
Rate (%)	26	24	16	22	14	23

Exhibit 13 (continued)

	Whole group	Males	Females	Total	Direct	Indirect
Education level						
N successes	6	3	11	21	2	19
N predictions	105	105	105	315	42	273
Rate (%)	6	3	11	7	5	7
Self-esteem						
N successes	40	28	29	97	20	77
N predictions	97	97	97	291	39	252
Rate (%)	41	29	30	33	51	31
Social support						
N successes	71	52	61	184	35	149
N predictions	105	105	105	315	42	273
Rate (%)	68	50	58	58	83	55

power. The percent of variance explained in one's dependent (criterion) variables by one's independent (explanatory, predictor) variables provides a good measure of a theory's explanatory power. Exhibit 12 lists the percent of variance explained in each of our basic 14 dependent variables beginning with happiness (49%) and global satisfaction (53%). On average 57% of the variance in domain satisfaction scores is explained by MDT, with a high of 79% for family relations and a low of 35% for education. To some extent the high percent of variance explained in satisfaction with family relations and friendships is the result of social support being defined by the mean of the mean scores for the former two variables. As it happened, the mean of each of the former two variables was 5.2, while the variance of the family relations variable was 1.51 and that of friendships was 1.44. Ignoring these possible anomalies, MDT was still able to explain 50% or more of the variance in 7 of the remaining 10 domain satisfaction scores. It was most successful in accounting for satisfaction with financial security (58%), paid employment (59%), recreation activity (56%), religion (62%) and self-esteem (58%).

Exhibit 13 summarizes the success rates of each of our predictor variables. The 7 discrepancy variables had an average success rate of 58%, ranging from 100% for the self-want discrepancy to 15% for the self-future discrepancy. That is, every time we predicted that the self-want discrepancy variable would have a significant effect, it did; but only 15% of the predicted effects of the self-future variable were confirmed. In fact, the self-others discrepan-

cy variable was also practically infallible, with a success rate of 99%. The third most successful discrepancy predictor was self-needs (62%). Since I had never used this variable before, it was very encouraging to find it so successful. It surpassed the self-best (53%) predictor, which was the third basic variable in my earlier studies and the self-deserved (47%) predictor, which was another new one. The self-progress (32%) variable was also new and fairly successful.

The last two columns of Exhibit 13 list the numbers and percents of direct and indirect effects of our predictors. Since the self-wants discrepancy variable was only used in direct predictions of satisfaction and happiness, its 42 successes yielded a 100% prediction success rate. All other discrepancy variables were used to make direct and indirect predictions as indicated earlier. Thus, for example, the self-others discrepancy variable had 80 successful predictions, of which 41 were direct and 39 were indirect. Since 42 of the predictions made from this variable were direct, its success rate for direct predictions was 41/42 = 98%. Its success rate for indirect predictions was 100%. Hence, both the *total* and the *distribution* of predicted effects of this variable were almost exactly as MDT predicted. The self-needs discrepancy variable had the third best total (62%), indirect (95%) and average (63%) prediction success rates. In fact, the indirect prediction success rates were higher than the direct rates for each of the 6 variables that had both kinds of predictions, indicating a clear need for H3 in MDT.

The two satisfaction variables, self-esteem and social support, had total success rates of 33% and 58%, respectively (Exhibit 13). Unlike the discrepancy variables, the direct prediction success rates were higher than the indirect rates for these variables. For social support the direct rate was a very solid 83%, compared to a 55% indirect rate.

As indicated earlier, these variables were used as surrogate measures pending further tests with alternatives. Presumably the surrogate satisfaction measures would have some method effects resulting from the similarity of items (Diener, 1984). Still, whatever method effects there are, they seem to be at best erratic. For example, Exhibits 8 and 9 show that often there is no significant relation between global satisfaction, happiness and one or another domain satisfaction score in spite of the similarities in the format of the items. Furthermore, as I have just mentioned, the two surrogate variables in particular are not uniformly successful as predictors.

The four demographic predictors had an average total prediction success

rate of 19% with a high of 29% for age and a low of 7% for educational level (Exhibit 13). In every case there were higher indirect than direct rates. Given the results presented earlier, one would have expected these variables to have low individual success rates, but there was no reason to expect that their indirect rates would be higher than their direct rates. This seems to demand some rethinking of H5 of MDT.

Exhibits 14 to 27 show the detailed results of applying MDT to happiness, global and twelve domains of satisfaction. Exhibit 14 graphically illustrates the application of MDT to satisfaction with life as a whole for 635 respondents. Fifty-three percent of the variance was explained. The solid lines leading to net satisfaction represent the results of regressing this variable on the other thirteen in the diagram. The dashed lines leading to self-wants represent the results of regressing this variable on the six discrepancy and six conditioning variables. Thirty-nine percent of the variance in self-wants was explained by those twelve predictors. The dotted lines leading to the column of six discrepancy variables from the six conditioners represent the results of regressing each of the former on the latter set. The number in each of the six discrepancy boxes indicates the percent of variance explained by the 6 conditioning variables. For example, the latter variables explained 19% of the variance in self-others scores, 10% in self-deserved scores, etc.

The three columns of numbers attached to the solid, dashed and dotted lines are standardized regression coefficients (Betas) or path coefficients. For example, the number 0.246^{a} above the arrow from self-wants to net satisfaction is a path coefficient indicating that for every unit of change in self-wants there will be a change of 25% of a unit in net satisfaction (when both variables are standardized to have means of zero and standard deviations of one). Figuratively speaking, for every full step in self-wants, there will be a quarter of a step in net satisfaction. In order to interpret the dotted lines, follow each line first as far to the left and then as far down the page as it will go. For example, the number 0.303^{a} at the head of the column on the left is on a line that goes all the way down to self-esteem. Following that, 0.174^{a} goes all the way down to social support, and so on. The superscripts on these Betas indicate statistical significance levels. From Exhibit 14 on into Appendix A, I adopt the convention that a means $p \leqslant 0.001$, b: $p \leqslant 0.005$, c: $p \leqslant 0.01$ and d: $p \leqslant 0.05$.

Because Exhibit 14 is relatively difficult to read compared to the tables in Exhibits 15–27, I have not drawn any more diagrams. All other summaries

EXHIBIT 14

Satisfaction with life as a whole

Percent of variance explained: 53[a], $N = 635$

[a] $P \leq 0.001$

[b] $P \leq 0.005$

[c] $P \leq 0.001$

[d] $P \leq 00.05$

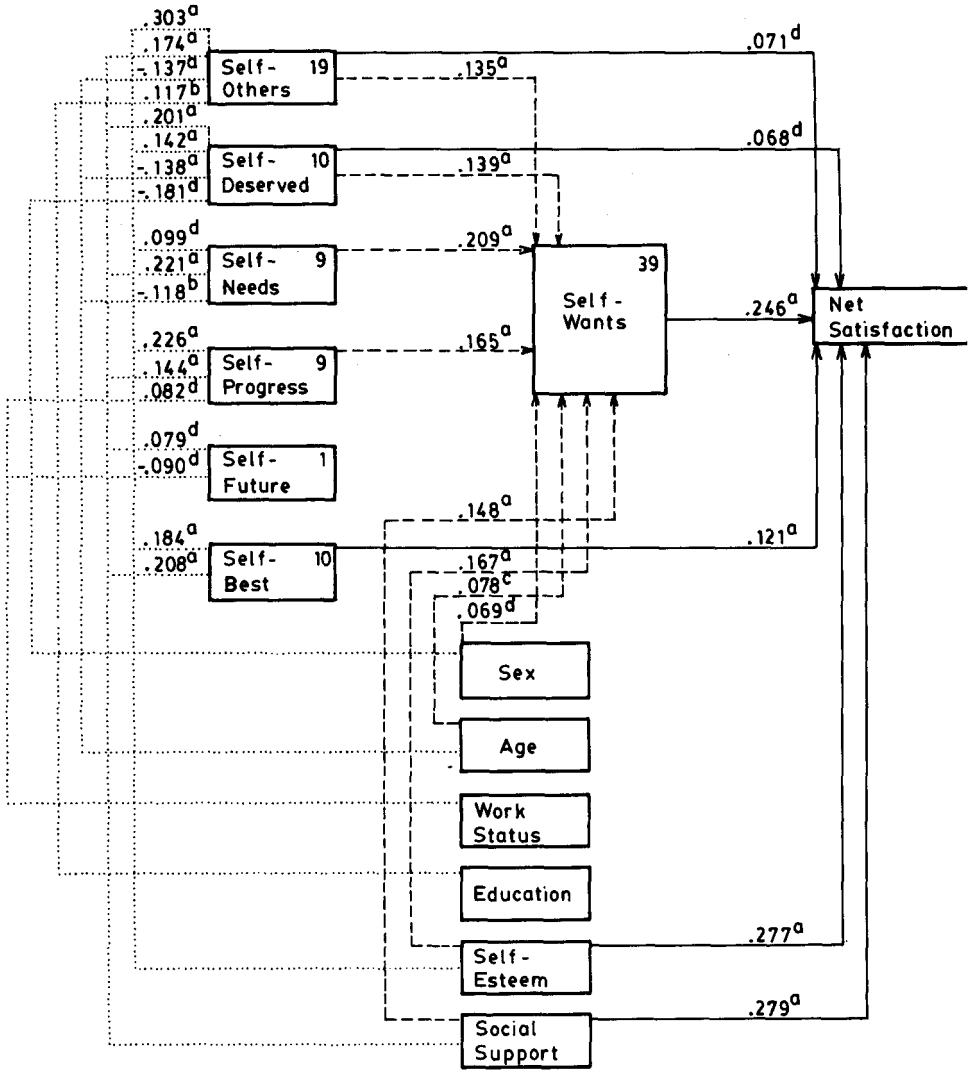

EXHIBIT 15

Happiness with life as a whole

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Happiness
A = −0.137[a]	A = −0.138[a]	A = −0.118[b]	SO = 0.135[a]	SO = 0.129[a]
S = 0	S = −0.081[d]	S = 0	SD = 0.139[a]	SD = 0.103[b]
WS = 0	WS = 0	WS = 0	SN = 0.209[a]	SN = 0
E = 0.117[b]	E = 0	E = 0	SP = 0.165[a]	SP = 0
SE = 0.303[a]	SE = 0.142[a]	SE = 0.099[d]	SH = 0	SH = 0
SS = 0.174[a]	SS = 0.201[a]	SS = 0.221[a]	SB = 0	SB = 0.214[a]
R^2 = 0.19[a]	R^2 = 0.10[a]	R^2 = 0.09[a]	A = 0.078[c]	A = 0
			S = 0.069[d]	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0.086[a]
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.167[a]	SE = 0.183[a]
S = 0	S = −0.090[d]	S = 0	SS = 0.148[a]	SS = 0.235[a]
WS = −0.082[d]	WS = 0	WS = 0	R^2 = 0.39[a]	SW = 0.172[a]
E = 0	E = 0	E = 0		R^2 = 0.49[a]
SE = 0.226[a]	SE = 0	SE = 0.184[a]		N = 635
SS = 0.144[a]	SS = 0.079[d]	SS = 0.208[a]		
R^2 = 0.09[a]	R^2 = 0.01[d]	R^2 = 0.10[a]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

of results of applying MDT are presented as in Exhibit 15, for happiness with life as a whole. In this exhibit, each set of figures represents a separate regression, with the word at the top of the set indicating the dependent variable. For example, the extreme right column indicates the results of regressing happiness on the thirteen predictors listed below it. The abbreviations are as follows for all these exhibits.

SO: Self-Other
SD: Self-Deserved
SN: Self-Needs
SP: Self-Progress
SH: Self-Future
SB: Self-Best
SW: Self-Wants
A: Age
S: Sex
WS: Work Status
E: Education
SE: Self-Esteem
SS: Social Support

Betas and their significance levels are listed, followed by the squared multiple

EXHIBIT 16

Satisfaction with health

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.390[a]	SO = 0.173[a]
S = 0	S = −0.102[b]	S = 0	SD = 0.079[d]	SD = 0.069[d]
WS = 0	WS = 0	WS = 0	SN = 0.134[a]	SN = 0
E = 0	E = 0	E = 0	SP = 0.104[b]	SP = 0
SE = 0.188[a]	SE = 0.127[a]	SE = 0.144[a]	SH = −0.101[a]	SH = 0
SS = 0	SS = 0	SS = 0	SB = 0.149[a]	SB = 0
R^2 = 0.03[a]	R^2 = 0.03[a]	R^2 = 0.02[a]	A = 0	A = −0.058[a]
			S = 0.108[a]	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.175[a]	SE = 0.088[b]
S = 0	S = 0	S = −0.106[c]	SS = 0	SS = 0.098[a]
WS = 0	WS = 0	WS = 0	R^2 = 0.49[a]	SW = 0.498[a]
E = 0	E = 0	E = 0		R^2 = 0.50[a]
SE = 0.213[a]	SE = 0	SE = 0.173[a]		N = 647
SS = 0	SS = 0.127[a]	SS = 0		
R^2 = 0.04[a]	R^2 = 0.02[a]	R^2 = 0.04[a]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

correlation coefficient (R^2) and its significance level, and finally the number (N) of cases involved. The latter number is only given for the primary regression. For example, then, this column of numbers indicates that 49% of the variance in happiness with life as a whole was explained by MDT (cf. 39% in Exhibit 9), the most influential variable was social support (Beta = 0.235[a]) and the most influential discrepancy variable was self-wants (0.172[a]). The second column from the right indicates that 39% of the variance in self-wants scores was explained by the 12 predictors listed in that column, and the self-needs discrepancy variable was the most influential predictor (0.209[a]). The column headed "self-needs" indicates that 9% of the variance in this discrepancy variable was explained by the 6 variables listed below it, led by social support (0.221[a]).

It would obviously take more space than one can allow in an article to review each of the detailed Exhibits. However, it is possible to call your attention to a few notable features. Hereafter, it will be convenient to distin-

EXHIBIT 17

Satisfaction with financial security

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.256[a]	A = −0.170[a]	A = −0.149[a]	SO = 0.211[a]	SO = 0.254[a]
S = 0	S = 0	S = 0	SD = 0.155[a]	SD = 0
WS = 0.156[a]	WS = 0	WS = 0	SN = 0.319[a]	SN = 0.178[a]
E = 0	E = 0	E = 0	SP = 0	SP = 0
SE = 0	SE = 0	SE = 0	SH = 0	SH = 0
SS = 0.096[c]	SS = 0.091[d]	SS = 0.084[c]	SB = 0.166[a]	SB = 0.118[a]
R^2 = 0.08[a]	R^2 = 0.04[a]	R^2 = 0.03[a]	A = 0.119[a]	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.188[a]	A = 0	A = 0.046[a]	SE = 0	SE = 0
S = 0	S = 0	S = 0	SS = 0	SS = 0.076[b]
WS = 0	WS = 0	WS = 0	R^2 = 0.46[a]	SW = 0.356[a]
E = 0	E = 0	E = 0		R^2 = 0.58[a]
SE = 0	SE = 0	SE = 0		N = 646
SS = 0.127[a]	SS = 0.119[b]	SS = 0		
R^2 = 0.05[a]	R^2 = 0.01[b]	R^2 = 0.05[a]		

[a] $P \leq 0.01$
[b] $P \leq 0.05$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

guish two kinds of indirect effects, namely, effects on the self-wants discrepancy variable and effects on any of the other six discrepancy variables. I will refer to the former as "second-level" and to the latter as "third-level" effects.

Exhibits 14 and 15 show that social support has the greatest direct effect on happiness and global satisfaction, but not the greatest second-level effect. The perceived discrepancy between what one has and needs has the greatest second-level effect on these two global variables.

Given the enormous literature regarding the impact of social support on self-perceived health, one would have expected it to have had a similar significant impact on perceived satisfaction with health. Exhibit 16 shows that this is not the case for this data-set. On the other hand, self-esteem has significant second and third-level effects.

Satisfaction with financial security and paid employment tend to be dominated by the perceived self-wants discrepancy (Exhibits 17 and 19),

EXHIBIT 18

Satisfaction with family relations

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.086[c]	A = 0	A = −0.114[a]	SO = 0.321[a]	SO = 0.189[a]
S = 0	S = 0	S = 0	SD = 0.114[a]	SD = 0
WS = 0	WS = −0.097	WS = 0	SN = 0.199[a]	SN = 0.113[a]
E = 0	E = 0	E = 0	SP = 0	SP = 0
SE = 0	SE = 0	SE = 0	SH = −0.061[d]	SH = 0
SS = 0.573[a]	SS = 0.448[a]	SS = 0.489[a]	SB = 0.099[a]	SB = 0
R^2 = 0.34[a]	R^2 = 0.20[a]	R^2 = 0.26[a]	A = 0	A = 0
			S = 0	S = −0.042[d]
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = −0.073[d]	SE = 0	SE = −0.063[d]
S = 0	S = 0	S = 0	SS = 0.251[a]	SS = 0.537[a]
WS = −0.073[d]	WS = −0.144[a]	WS = 0	R^2 = 0.60[a]	SW = 0.222[a]
E = 0	E = 0	E = 0		R^2 = 0.79[a]
SE = 0	SE = 0	SE = 0		N = 641
SS = 0.404[a]	SS = 0.176[a]	SS = 0.411[a]		
R^2 = 0.16[a]	R^2 = 0.05[a]	R^2 = 0.18[a]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

while self-esteem has no effect at all on the former variable and almost no effect on the latter.

Curiously, self-esteem has relatively little impact on satisfaction with family relations and friendships (Exhibits 18 and 20). However, the social comparison variable (self-others) has strong second-level effects in both cases.

Satisfaction with housing in largely determined by the self-wants and self-others discrepancies, with the latter (self-others) mainly influenced positively by social support and work status, and negatively by age (Exhibit 21).

Satisfaction with housing is largely determined by the self-wants and self-tion are all strongly dominated by the self-wants and self-others discrepancies (Exhibits 23–26). Social support has significant first and third-level effects, but no second-level effects on satisfaction with recreation activity (Exhibit 23). Social comparison has a surprisingly high impact on satisfaction with religion, especially since the latter is defined simply as "your spiritual fulfilment" (Exhibit 25).

Given the variety of discrepancy hypotheses available in the literature, the

EXHIBIT 19

Satisfaction with paid employment

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.205[a]	A = 0	A = −0.126[c]	SO = 0.269[a]	SO = 0.244[a]
S = 0	S = 0	S = −0.112[d]	SD = 0.160[a]	SD = 0
WS = 0.520[a]	WS = 0.159[a]	WS = 0.290[a]	SN = 0.222[a]	SN = 0
E = 0	E = 0	E = 0	SP = 0	SP = 0.091[d]
SE = 0	SE = 0	SE = 0	SH = 0	SH = 0
SS = 0.088[d]	SS = 0.110[d]	SS = 0	SB = 0.094[d]	SB = 0
R^2 = 0.27[a]	R^2 = 0.03[a]	R^2 = 0.09[a]	A = 0	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0.182[a]	WS = 0.222[a]
			E = 0	E = 0
A = −0.152[a]	A = 0	A = −0.239[a]	SE = 0	SE = 0
S = 0	S = 0	S = 0	SS = 0	SS = .115[a]
WS = 0.202[a]	WS = −0.094[d]	WS = 0.493[a]	R^2 = 0.49[a]	SW = 0.390[a]
E = 0	E = 0	E = 0		R^2 = 0.59[a]
SE = 0	SE = 0.107[c]	SE = 0		N = 371
SS = 0.093[d]	SS = 0	SS = 0		
R^2 = 0.06[a]	R^2 = 0.02[c]	R^2 = 0.24[a]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

question has been raised about the relative importance of each type, e.g., by Goodman (1974) and Diener (1984). The investigations reported in Michalos (1980a, 1982a, 1983a) indicated a fairly clear and consistent rank ordering of impact of perceived discrepancies on net satisfaction. In a total of 68 regressions, using three gap variables as predictors and some (domain or global) satisfaction or happiness variable as criteria, 65 times the gap between what one has and wants had the greatest impact (highest Beta value). The gap between what one has and relevant others have came in second 46 times, and the gap between what one has and the best one has ever had in the past came in third 50 times. There were only 6 times in which a variable involving the gap between what one has now and expects to have in five years was used, and in every case this variable ranked fourth behind the others and accounted for a negligible percent of the explained variance in the dependent variables.

Exhibit 28 summarizes the relative impacts of discrepancy types on satisfaction and happiness for this data-set. For example, the self-wants variable has the greatest impact 38 times, second-greatest 4 times and fourth-greatest

EXHIBIT 20

Satisfaction with friendships

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.341[a]	SO = 0.142[a]
S = 0	S = 0	S = 0	SD = 0.081[c]	SD = 0
WS = 0	WS = 0	WS = 0	SN = 0.096[c]	SN = 0
E = 0	E = 0	E = 0	SP = 0	SP = 0
SE = 0.143[a]	SE = 0	SE = 0.093[b]	SH = 0	SH = 0
SS = 0.521[a]	SS = 0.387[a]	SS = 0.410[a]	SB = 0.094[b]	SB = 0.095[a]
R^2 = 0.34[a]	R^2 = 0.15[a]	R^2 = 0.20[a]	A = 0.082[b]	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = −0.109[a]	A = 0	SE = 0.113[a]	SE = 0
S = 0	S = 0	S = 0	SS = 0.262[a]	SS = 0.540[a]
WS = 0	WS = 0	WS = 0	R^2 = 0.56[a]	SW = 0.243[a]
E = 0	E = 0	E = 0		R^2 = 0.75[a]
SE = 0.085[d]	SE = 0	SE = 0		N = 650
SS = 0.336[a]	SS = 0.089[d]	SS = 0.426[a]		
R^2 = 0.14[a]	R^2 = 0.02[a]	R^2 = 0.18[a]		

[a] $P < 0.001$
[b] $P < 0.005$
[c] $P < 0.01$
[d] $P < 0.05$
0 Significance level too low to enter equation.

once. Thus, the self-wants variable is typically the most influential of all seven discrepancy variables. The self-others variable is typically second. In order to aggregate all the rankings in Exhibit 28 to obtain a general view, I assigned each variable a weight. Six points were given to a variable for each time it was first, five points for each second, and so on to one for sixth place. Then the products were summed to get a total weight for each variable. Using this scheme, it is clear that the three discrepancy variables that I have worked with most are the three most influential, namely, self-wants, self-others and self-best.

In terms of the familiar theories reviewed earlier, one might say that Exhibit 28 shows that aspiration theory (self-wants) is superior to social comparison theory (self-others), that equity theory (self-deserved) is slightly superior to person-environment fit theory (self-needs), and that cognitive dissonance theory (insofar as it involves future expectations (self-future)) is the least powerful of the lot. Given the artificiality of the weighting scheme, the limitations of the data-set and the severe reduction of the familiar theories

EXHIBIT 21

Satisfaction with housing

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.166[a]	A = −0.098[d]	A = −0.118[b]	SO = 0.306[a]	SO = 0.248[a]
S = 0.080[d]	S = 0	S = 0	SD = 0.084[d]	SD = 0.114[b]
WS = 0.128[a]	WS = 0	WS = 0	SN = 0.113[c]	SN = 0
E = 0	E = 0	E = 0.097[d]	SP = 0.110[c]	SP = 0.080[d]
SE = 0	SE = 0	SE = 0	SH = 0	SH = 0
SS = 0.131[a]	SS = 0	SS = 0.108[c]	SB = 0.166[a]	SB = 0
R^2 = 0.06[a]	R^2 = 0.01[d]	R^2 = 0.03[c]	A = 0	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.222[a]	A = 0	A = 0	SE = 0	SE = 0.66[d]
S = 0	S = 0	S = 0	SS = 0	SS = 0.147[a]
WS = 0.84[d]	WS = 0	WS = 0	R^2 = 0.37[a]	SW = 0.325[a]
E = 0.097[d]	E = 0	E = 0.79[d]		R^2 = 0.44[a]
SE = 0	SE = 0	SE = 0		N = 644
SS = 0	SS = 0	SS = 0.089[d]		
R^2 = 0.04[a]	R^2 = 0	R^2 = 0.01[d]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Signifiance level too low to enter equation.

to the few representative items in my questionnaire, one should not press the significance of this rank ordering very far. Still, I believe it is the first time anyone has ever tried to systematically assess the relative superiority of these theories.

Exhibit 29 is like the one before it, with the addition of self-esteem and social support. After self-wants and self-others, social support has the greatest relative impact out of the nine variables.

Appendix Exhibits A.1 to A.14 give detailed results of applying MDT to the happiness, global and domain satisfaction of males and females. The overviews given in Exhibits 12, 13, 28 and 29 cover this material too. On average MDT explained 48% of the variance in the global variables for males and 55% for females. For males, on average 56% of the variance in domain satisfaction was explained, compared to 58% for females. For both groups, the highest R^2's went to satisfaction with family relations and the lowest to satisfaction with education.

Again, only a few of the interesting results in these exhibits can be empha-

EXHIBIT 22

Satisfaction with area lived in

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = −0.088[d]	A = −0.083[d]	SO = 0.210[a]	SO = 0.234[a]
S = 0.086[d]	S = 0	S = 0	SD = 0	SD = 0.073[d]
WS = 0	WS = 0	WS = 0.104[c]	SN = 0.206[a]	SN = 0
E = 0	E = 0	E = 0	SP = 0.137[a]	SP = 0.076[d]
SE = 0	SE = 0	SE = 0	SH = −0.114[a]	SH = 0
SS = 0.097[c]	SS = 0.086[d]	SS = 0.082[d]	SB = 0.209[a]	SB = 0
R^2 = 0.02[d]	R^2 = 0.01[d]	R^2 = 0.02[d]	A = 0	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0.066[d]	WS = 0
			E = 0	E = 0
A = −0.186[a]	A = 0	A = 0	SE = 0	SE = 0
S = 0	S = 0	S = 0.077[d]	SS = 0	SS = 0.197[a]
WS = 0	WS = −0.116[b]	WS = 0	R^2 = 0.37[a]	SW = 0.408[a]
E = 0.089[d]	E = 0	E = 0		R^2 = 0.48[a]
SE = 0	SE = 0	SE = 0		N = 644
SS = 0	SS = 0	SS = 0.089[d]		
R^2 = 0.03[b]	R^2 = 0.01[b]	R^2 = 0.01[d]		

[a] $P < 0.001$
[b] $P < 0.005$
[c] $P < 0.01$
[d] $P < 0.05$
0 Significance level too low to enter equation.

sized. Notice, for example, that age has six negative third-level effects on female satisfaction with paid employment, but only one such effect for males (Exhibit A.6). Social support has only two effects on male satisfaction with recreation activity, but seven effects on female satisfaction (Exhibit A.10). Educational level has a single direct effect on male and female satisfaction with religion, but it is positive for males and negative for females (Exhibit A.11). Self-esteem has only one direct effect on male satisfaction with transportation, but it has one direct and three indirect effects on female satisfaction (Exhibit A.13). Work status has all six third-level effects on male satisfaction with transportation, but only one such effect for females.

DISCUSSION

Having completed our analysis of the Guelph undergraduate data-set with MDT, there are a few loose ends that should be nailed down. In the first place, it may have been noticed that all but one of the variables used here

EXHIBIT 23

Satisfaction with recreation activity

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.393[a]	SO = 0.282[a]
S = −0.094[c]	S = 0	S = 0	SD = 0	SD = 0
WS = 0	WS = 0	WS = 0	SN = 0.129[a]	SN = 0
E = 0	E = 0	E = 0	SP = 0.154[a]	SP = 0
SE = 0.175[a]	SE = 0.118[b]	SE = 0.120[b]	SH = 0	SH = 0
SS = 0.214[a]	SS = 0.139[a]	SS = 0.171[a]	SB = 0.143[a]	SB = 0.094[b]
R^2 = 0.11[a]	R^2 = 0.04[a]	R^2 = 0.05[a]	A = 0	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = −0.078[d]	A = 0	SE = 0.091[b]	SE = 0.057[d]
S = 0	S = 0	S = 0	SS = 0	SS = 0.125[a]
WS = 0	WS = 0	WS = 0	R^2 = 0.48[a]	SW = 0.415[a]
E = 0	E = 0	E = 0		R^2 = 0.56[a]
SE = 0.157[a]	SE = 0	SE = 0		N = 646
SS = 0.112[c]	SS = 0	SS = 0.162[a]		
R^2 = 0.05[a]	R^2 = 0.01[d]	R^2 = 0.03[a]		

[a] $P \leqslant 0.001$
[b] $P \leqslant 0.005$
[c] $P \leqslant 0.01$
[d] $P \leqslant 0.05$
0 Significance level too low to enter equation.

(*viz.*, social support) are based on single item measures, in spite of the fact that generally speaking if all other things are equal, multi-item measures (indexes, scales) tend to have higher levels of reliability (Zeller and Carmines (1980); Anderson, Basilevsky and Hum (1983)). The main reason for using single item measures with some face validity here is that I am primarily interested in tracing the boundaries or scope of MDT in terms of its domains of applicability. I want to have a rough idea fairly early about where this sort of theory is likely to work. Besides this basic consideration, there is also the problem of increasing the length of the questionnaire with the use of multi-item measures. Moreover, as Schuessler (1982) had admirably shown, there is no guarantee that the more items a measure has, the more reliable it will be. For all these reasons, then, it seems wise to stay with single item measures for now.

The construct validity of the D-T scale of Andrews and Withey (1976) was thoroughly examined by these authors, and my delightful-terrible scale is simply a linguistically purer version of their scale. The original scale had

EXHIBIT 24

Satisfaction with religion

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.340[a]	SO = 0.384[a]
S = 0	S = 0	S = 0	SD = 0	SD = 0
WS = 0	WS = 0	WS = 0	SN = 0.247[a]	SN = −0.091[d]
E = 0	E = 0	E = 0	SP = 0	SP = 0
SE = 0.182[a]	SE = 0.137[b]	SE = 0.157[b]	SH = 0	SH = 0
SS = 0.140[b]	SS = 0	SS = 0.136[c]	SB = 0.154[a]	SB = 0.142[a]
R^2 = 0.07[a]	R^2 = 0.02[b]	R^2 = 0.05[b]	A = 0	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.098[d]	SE = 0.104[b]
S = 0	S = 0.107[d]	S = 0	SS = 0.113[c]	SS = 0.073[d]
WS = 0	WS = 0	WS = 0	R^2 = 0.45[a]	SW = 0.400[a]
E = 0	E = 0	E = 0		R^2 = 0.62[a]
SE = 0.115[d]	SE = 0	SE = 0.106[d]		N = 396
SS = 0.143[b]	SS = 0	SS = 0.155[b]		
R^2 = 0.04[b]	R^2 = 0.01[d]	R^2 = 0.04[b]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

"approximately 65% valid variance" and "roughly eight percent of the total variance can be attributed to method effects" (Andrews and Withey, 1976, p. 189). I suppose that my delightful-terrible scale has fairly similar characteristics.

All of the perceived discrepancy measures are designed on the working assumption that people have distinct and identifiable levels of wants, needs, expectations and so on. But it is more likely that any levels of experienced wants, etc. are vaguely bounded by intervals which obscurely blend into perceivable chunks (Michalos, 1967). Following a suggestion from Samuel Stouffer, Rodman (1963) used the idea of an interval, "wider range of values" or "value-stretch" to account for the apparently contradictory findings in delinquency studies showing that society is based upon both a "common value system" and a "class-differentiated value system". Although I suspect it is misleading to describe perceptual limitations as some kind of an expanded range of values, I think we would all agree on the fuzziness of perceived discrepancies.

EXHIBIT 25

Satisfaction with self-esteem

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.458[a]	SO = 0.276[a]
S = −0.124[a]	S = −0.139[a]	S = −0.148[a]	SD = 0	SD = 0.068[d]
WS = 0	WS = 0	WS = 0	SN = 0.187[a]	SN = 0
E = 0	E = 0	E = 0	SP = 0	SP = 0
SS = 0.254[a]	SS = 0.160[a]	SS = 0.235[a]	SH = 0	SH = 0
R^2 = 0.08[a]	R^2 = 0.04[a]	R^2 = 0.07[a]	SB = 0.155[a]	SB = 0
			A = 0	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0.121[b]	SS = 0.080[c]	SS = 0.127[a]
S = −0.105[c]	S = 0	S = 0	R^2 = 0.50[a]	SW = 0.463[a]
WS = 0	WS = −0.108[b]	WS = 0		R^2 = 0.58[a]
E = 0	E = 0	E = 0		N = 644
SS = 0.222[a]	SS = 0.113[b]	SS = 0.236[a]		
R^2 = 0.06[a]	R^2 = 0.02[b]	R^2 = 0.06[a]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

It may also have been noticed that, while all of the discrepancy measures are designed to run from the relatively unattractive (= 1) to the attractive (= 7), sometimes a score of 4 indicates a point of congruence and sometimes not. For example, for the self-wants measure 4 indicates "half as well as what you want" and for the self-deserved measure 4 indicates "matches exactly what is deserved". At this point, I don't know if these differences are important or not. However, at least for the self-deserved measure, it is important to have the congruence point at 4 in order to see what happens when people get more than they think they deserve. Examining cross-tabulations and a variety of measures of association between satisfaction and self-deserved discrepancy scores, I found no evidence of a U-shaped relationship. In particular, there was no evidence that satisfaction decreased as one perceived that one was getting more than one deserved. This is contrary to some results cited by Walster, Berscheid and Walster (1976).

Just as no evidence of a U-shaped relationship appeared, there was no evidence that what I call "conditioning variables" function as moderating

EXHIBIT 26

Satisfaction with transportation

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.112[c]	A = 0	A = 0.123[b]	SO = 0.244[a]	SO = 0.268[a]
S = 0	S = 0	S = −0.077[d]	SD = 0.109[d]	SD = 0
WS = 0.103[c]	WS = 0.103[c]	WS = 0	SN = 0.254[a]	SN = 0.151[a]
E = 0	E = 0	E = 0	SP = 0.079[d]	SP = 0
SE = 0	SE = 0	SE = 0	SH = 0	SH = 0
SS = 0	SS = 0	SS = 0.080[d]	SB = 0.179[a]	SB = 0
R^2 = 0.01[c]	R^2 = 0.01[c]	R^2 = 0.02[d]	A = 0.128[a]	A = 0.082[b]
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.140[a]	A = 0	A = −0.144[a]	SE = 0	SE = 0.146[a]
S = 0	S = 0	S = 0.081[d]	SS = 0	SS = 0
WS = 0.113[b]	WS = −0.083[d]	WS = 0.172[a]	R^2 = 0.51[a]	SW = 0.408[a]
E = 0	E = 0	E = 0		R^2 = 0.55[a]
SE = 0	SE = 0.091[d]	SE = 0		N = 631
SS = 0	SS = 0	SS = 0		
R^2 = 0.02[a]	R^2 = 0.01[d]	R^2 = 0.04[a]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

variables as the latter is understood in LaRocco, House and French (1980) and Zedeck (1971). Examination of over 1700 pairs of equations including one with and one without a conditioning variable in the form of a product term revealed no significant changes in the predictive power of the equations. For example, the predictive strength of self-others discrepancy scores and age was the same as that of self-others scores, age and the product of self-others scores and age.

In correspondence concerning earlier work, Aubrey McKennell suggested that satisfaction and self-want discrepancy variables might merely be two measures of the same thing. Using the strategy recommended by Zeller and Carmines (1980) to distinguish method artifacts from substantive dimensions when factor analysis produces two factors from a data-set, it is possible to test this suggestion. The crux of Zeller and Carmines' argument is the simple observation that if two variables are measuring the same thing, then they ought to have similar relations to other "theoretically relevant external variables ... in terms of direction, strength, and consistency" (Zeller and

EXHIBIT 27

Satisfaction with education

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.164[a]	SO = 0.180[a]
S = 0	S = −0.082[d]	S = 0	SD = 0.133[a]	SD = 0.087[d]
WS = 0	WS = 0	WS = 0	SN = 0.283[a]	SN = 0
E = 0.187[a]	E = 0	E = 0	SP = 0	SP = 0
SE = 0.202[a]	SE = 0	SE = 0	SH = 0	SH = 0
SS = 0	SS = 0.116[b]	SS = 0.132[a]	SB = 0.101[c]	SB = 0.198[a]
R^2 = 0.08[a]	R^2 = 0.02[b]	R^2 = 0.02[a]	A = 0	A = 0
			S = 0	S = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0.079[d]	SE = 0.120[a]	SE = 0
S = −0.088[d]	S = 0	S = 0	SS = 0	SS = 0.179[a]
WS = 0	WS = −0.134[a]	WS = 0	R^2 = 0.28[a]	SW = 0.285[a]
E = 0	E = 0	E = 0		R^2 = 0.35[a]
SE = 0	SE = 0	SE = 0.115[b]		N = 645
SS = 0.126[a]	SS = 0	SS = 0		
R^2 = 0.02[b]	R^2 = 0.02[a]	R^2 = 0.02[d]		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

Carmines, 1980, p. 97). Since this data-set includes 952 cases in which a satisfaction and a self-want discrepancy variable are related to a common third "theoretically relevant external variable", there are plenty of opportunities to apply the Zeller and Carmines test. I looked at every one of these triples, counting the relations as similar if the satisfaction and self-want variables both had significant associations to the third variable in the set (whether the associations were positive or negative), and counting the relations as different only if one of the former variables had a significant relation to the third. Clearly, my criterion of similarity of relations is easier to satisfy than that proposed by Zeller and Carmines. Nevertheless, similar relations were found in only 304 (32%) of the 952 sets of triples. I conclude, therefore, that the satisfaction and self-want discrepancy variables are not merely two measures of the same thing.

As indicated earlier, the predictive success and explanatory power of theories constitute reasonable and minimal measures of adequacy. Unfortunately, they do not constitute unambiguous measures. For example, one

EXHIBIT 28

Comparison of relative impacts of discrepancy types on satisfaction and happiness

	Firsts	Seconds	Thirds	Fourths	Fifths	Sixths	Sevenths	Total weight
Self wants	38	4	0	1	0	0	0	251
Self others	3	31	6	0	0	0	0	197
Self deserved	0	0	11	4	1	0	0	58
Self needs	0	1	9	3	0	0	0	50
Self progress	0	1	5	2	0	0	0	35
Self future	0	0	1	3	0	1	0	14
Self best	2	6	6	2	0	0	0	97

EXHIBIT 29

Comparison of relative impacts of discrepancy types, self-esteem and social support on satisfaction and happiness

	Firsts	Seconds	Thirds	Fourths	Fifths	Sixths	Sevenths	Total weight
Self wants	31	4	5	1	0	1	0	230
Self others	1	29	3	4	3	1	0	182
Self deserved	0	0	3	5	6	2	0	41
Self needs	0	0	7	4	2	0	0	44
Self progress	0	0	3	4	3	0	0	30
Self future	0	0	0	1	2	2	0	14
Self best	1	2	4	9	0	0	0	59
Self esteem	1	2	5	6	5	1	0	65
Social support	9	4	12	5	2	2	0	143

might be more interested in the comparative than in the absolute predictive success ratio of a theory. Does the theory have a success ratio better than chance, better than alternative available theories, or better than any logically possible alternatives? If one says success ratios should be better than chance, does that mean each prediction should have at most a 5% probability of success merely as a result of chance (i.e., the standard assumption about minimal statistical significance when testing particular hypotheses), that each prediction should have at least a 50% probability of success or, perhaps, that the total batting average of the theory, considering all the predictions derived from it, should be at least 50%? Exactly how should the infamous Principle of Indifference be applied here, if at all? I and others have shed enough ink on such questions in other places to allow me to neglect lengthy comment now. However, because I adopted the relatively naive adequacy measure of

Reichenbach (1949) and there is so much more to be said about such things, at least this one paragraph seems warranted. (Interested readers can find my most relevant views on these issues in Michalos 1969, 1971, 1976, 1980b, 1980c, 1983b.)

In an extremely provocative article, Zajonc (1980, p. 151) claimed that,

> Affect is considered by most contemporary theories to be postcognitive, that is, to occur only after considerable cognitive operations have been accomplished. Yet ... [he concludes] that affect and cognition are under the control of separate and partially independent systems that can influence each other in a variety of ways, and that both constitute independent sources of effects in information processing.

Although I have scrupulously tried to avoid any direct reference to affect and its relations to cognition, a few words are in order. (I will have a detailed discussion of these issues in my book on *A Pragmatic Theory of Value*.)

Basically, I believe that *affect* is an *effect* of cognitive and, more precisely, conative operations, as well as a *cause* of a variety of actions broadly construed (i.e., including cognition). This is suggested by Exhibits 1 and 2, but it is not made explicit. The perceptual core of MDT that is illustrated in Exhibit 2 shows net satisfaction as the effect of several antecedents, while the full theory illustrated in Exhibit 1 shows net satisfaction as the cause of action. My unstated assumption is that the causal antecedents specified in the basic hypotheses of MDT, H1–H6, are sufficient to produce any effects that are logically entailed by the concepts of satisfaction and happiness. Because any plausible conceptual analysis of net satisfaction and happiness would have to entail some reference to positive and negative affect, it follows that the working assumption of MDT is that any affective experiences connected to satisfaction and happiness are also caused by the antecedents specified in the theory.

Strictly speaking, then, the formulation of MDT that has guided this research is an oversimplification of my views about the relations between cognition, conation and affect. At this point my views are not entirely clear and it is, therefore, impossible for me to make MDT more precise. On the one hand, affect is a *signal* of previous cognition and conation; it is the felt aspect of thinking, wanting, needing and so on. On the other hand, affect is a *motivating force*; it is the felt aspect of attention, interest, purposiveness and so on. Research like that of Schwarz and Clore (1983) and Wills (1981) focuses on the motivating or causal nature of affect, while most of my research, including the present paper, has focused on the causal antecedents

of affect insofar as affect is implied by satisfaction and happiness.

In his *magnum opus* of 1890, *The Principles of Psychology*, William James clearly recognized that cognitions are virtually always found fused with feelings and interests. So, theories that boldly (or naively) try to assign some priority to one or the other are almost certainly engaged in some sort of scientific oversimplification. James, of course, would have been the first to allow such speculation, for his view of theories was that "none is absolutely a transcript of reality, but any of them may be useful. Their great use is to summarize old facts and to lead to new ones." (From James' *Pragmatism* (1907) according to Barzun, 1983, p. 86). It is in this spirit that MDT has been proposed, with its relatively primitive view of the relation between cognition and affect.

Finally, some mention should be made of the voluntarism which is at the heart of MDT and my own brand of pragmatic philosophy. It is a familiar fact of everyone's experience and a well-documented fact of psychological research that people can be persuaded or can persuade themselves to be more or less satisfied or happy with a wide variety of features of their lives (Diener (1984), Schwarz and Clore (1983), Fordyce (1983), Michalos (1985)). At a minimum that implies that in some circumstances, some kind of cognitive activity has some kind of priority over some kind of affect. The particular kinds of cognitive activities and the resulting affective states posited by MDT have already been explained. What must be emphasized now is the immense practical significance of the proposed causal sequence. Insofar as MDT is a reliable and valid representation of reality, the idea of *managing* satisfaction and happiness is plausible. This, of course, has a bright as well as a dark side.

On the bright side, MDT provides a moderately confirmed theoretical justification for education and rational persuasion. After all, if peoples' satisfaction and happiness are functions of how they perceive and think about their own and others wants, needs, deserts, status, etc., then there is a fundamental role to be played by all (informal and formal) education institutions. People's satisfaction and happiness can be more or less cognitively well-founded, and reasonable people will want to be sure that they are essentially well-founded.

On the darker side, however, MDT provides the same moderately confirmed theoretical justification for those who are inclined, wittingly or not, to pernicious manipulation. Enough has been written about misleading advertising (Michalos, 1980d) and the role of freedom of information in democracies

(Galnoor, 1977), to allow us to add nothing here. For our purposes, the important point is that the very same psychological processes that make it possible to rightly persuade people of things that are true, good and beautiful, also make it possible to wrongly persuade people of their opposites, falsehoods, evil and ugliness. Wills (1981) reviews a depressingly long list of studies showing that people's satisfaction can be increased by making "downward comparisons" with less fortunate others. It would be sad if this sort of satisfaction and happiness management caught on, and instead of trying to improve the world, most people merely tried to make themselves feel good by either actively inflicting or acquiescing while others inflicted hardship on relatively defenseless people. Wills' research suggests that this scenario is far from fantastic. Clearly, then, besides having a socio-psychological theory that assures us that people's satisfaction and happiness can be managed, we must have a theory of value and a moral theory to help us identify *good management* in the broadest sense of these terms. These latter theories I hope to provide in my treatise on value. The present version of MDT is a first installment.

SUMMARY

In this article I have introduced a fairly thorough account of multiple discrepancies theory (MDT), briefly reviewed its historical antecedents and submitted it to some empirical testing . The tests were made on a sample of 700 undergraduate students from the University of Guelph's 1984 summer term . The main results were as follows:

(a) Of 2184 predictions made from MDT, 771 (35%) were successful;
(b) Of a subset of 528 predictions involving only effects of perceived discrepancies, 289 (55%) were successful;
(c) MDT explained 49% of the variance in reported happiness scores for the whole group, 53% in global satisfaction and 50% or more in seven out of twelve domain satisfaction scores;
(d) MDT was most successful in accounting for the variance in satisfaction with financial security (58%), paid employment (59%), recreation activity (56%), religion (62%) and self-esteem (58%);
(e) Prediction success rates from six discrepancy variables to the self-wants variable were higher than the rates from the same six variables to satisfaction and happiness, indicating that the impact of the six

variables on our main dependent variables is most often indirect rather than direct;

(f) On average, the global satisfaction and happiness of females was influenced by satisfaction in more domains than that of males;

(g) In five out of six cases, MDT explained more of the variance in happiness and global satisfaction than an analytic model positing global well-being as a linear function of domain satisfactions;

(h) Some evidence was produced suggesting that in terms of relative explanatory power, a rank ordering may be formed with aspiration theory at the top, followed by the theories of social comparison, equity, person-environment fit and finally cognitive dissonance;

(i) The voluntaristic, pragmatic philosophy underlying MDT was emphasized, including its immense practical significance for good or evil.

APPENDIX A

EXHIBIT A.1

Satisfaction with life as a whole

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = −0.165[b]	A = −0.125[d]	SO = 0.173[b]	SO = 0.110[d]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0	E = 0	E = 0	SN = 0.261[a]	SN = 0
SE = 0.260[a]	SE = 0.176[b]	SE = 0.149[c]	SP = 0.186[a]	SP = 0
SS = 0.237[a]	SS = 0.138[d]	SS = 0.187[b]	SH = 0	SH = −0.093[d]
R^2 = 0.16[a]	R^2 = 0.09[a]	R^2 = 0.09[2]	SB = 0	SB = 0.129[c]
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.176[a]	SE = 0.252[a]
WS = −0.132[d]	WS = −0.119[d]	WS = 0	SS = 0.122[d]	SS = 0.262[a]
E = 0	E = 0	E = 0	R^2 = 0.38[a]	SW = 0.266[a]
SE = 0.218[a]	SE = 0	SE = 0.209[a]		R^2 = 0.50[a]
SS = 0.145[c]	SS = 0	SS = 0.186[b]		N = 283
R^2 = 0.09[a]	R^2 = 0.01[d]	R^2 = 0.10[a]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.137[c]	A = 0	A = −0.121[d]	SO = 0.111[d]	SO = 0
WS = 0	WS = 0	WS = 0	SD = 0.167[b]	SD = 0.104[c]
E = 0.158[b]	E = 0	E = 0	SN = 0.185[a]	SN = 0
SE = 0.337[a]	SE = 0	SE = 0	SP = 0.167[a]	SP = 0
SS = 0.142[c]	SS = 0.305[a]	SS = 0.268[a]	SH = 0	SH = 0
R^2 = 0.20[a]	R^2 = 0.09[a]	R^2 = 0.08[a]	SB = 0	SB = 0.130[b]
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = −0.141[c]	A = 0	SE = 0.166[a]	SE = 0.305[a]
WS = 0	WS = 0	WS = 0	SS = 0.165[a]	SS = 0.278[a]
E = 0	E = 0	E = 0	R^2 = 0.40[a]	SW = 0.256[a]
SE = 0.235[a]	SE = 0	SE = 0.160[b]		R^2 = 0.56[a]
SS = 0.140[c]	SS = 0.150[b]	SS = 0.228[a]		N = 340
R^2 = 0.09[a]	R^2 = 0.04[a]	R^2 = 0.10[a]		

EXHIBIT A.2

Happiness with life as a whole

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Happiness
A = 0	A = −0.165[b]	A = −0.125[d]	SO = 0.173[b]	SO = 0.152[b]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0.109[b]
E = 0	E = 0	E = 0	SN = 0.261[a]	SN = 0
SE = 0.260[a]	SE = 0.176[b]	SE = 0.149[c]	SP = 0.186[a]	SP = 0
SS = 0.237[a]	SS = 0.138[d]	SS = 0.187[b]	SH = 0	SH = 0
R^2 = 0.16[a]	R^2 = 0.09[a]	R^2 = 0.09[a]	SB = 0	SB = 0.270[a]
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.176[a]	SE = 0.175[a]
WS = −0.132[d]	WS = −0.119[d]	WS = 0	SS = 0.122[d]	SS = 0.205[a]
E = 0	E = 0	E = 0	R^2 = 0.38[a]	SW = 0.108[d]
SE = 0.218[a]	SE = 0	SE = 0.209[a]		R^2 = 0.45[a]
SS = 0.145[c]	SS = 0	SS = 0.186[b]		N = 283
R^2 = 0.09[a]	R^2 = 0.01[d]	R^2 = 0.10[a]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Happiness
A = −0.137[c]	A = 0	A = −0.121[d]	SO = 0.111[d]	SO = 0.113[c]
WS = 0	WS = 0	WS = 0	SD = 0.167[b]	SD = 0
E = 0.158[b]	E = 0	E = 0	SN = 0.185[a]	SN = 0.125[b]
SE = 0.337[a]	SE = 0	SE = 0	SP = 0.167[a]	SP = 0
SS = 0.142[c]	SS = 0.305[a]	SS = 0.268[a]	SH = 0	SH = 0
R^2 = 0.20[a]	R^2 = 0.09[a]	R^2 = 0.08[a]	SB = 0	SB = 0.164[a]
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0.095[c]
			E = 0	E = 0
A = 0	A = −0.141[c]	A = 0	SE = 0.166[a]	SE = 0.219[a]
WS = 0	WS = 0	WS = 0	SS = 0.165[a]	SS = 0.246[a]
E = 0	E = 0	E = 0	R^2 = 0.40[a]	SW = 0.207[a]
SE = 0.235[a]	SE = 0	SE = 0.160[b]		R^2 = 0.53[a]
SS = 0.140[c]	SS = 0.150[b]	SS = 0.228[a]		N = 340
R^2 = 0.09[a]	R^2 = 0.04[a]	R^2 = 0.10[a]		

EXHIBIT A.3

Satisfaction with health

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.427[a]	SO = 0.189[a]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0	E = 0	E = 0	SN = 0.128[c]	SN = 0
SE = 0.180[b]	SE = 0.155[b]	SE = 0.117[d]	SP = 0.139[c]	SP = 0
SS = 0	SS = 0	SS = 0	SH = −0.129[b]	SH = −0.088[d]
R^2 = 0.03[b]	R^2 = 0.02[b]	R^2 = 0.01[d]	SB = 0.105[d]	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.160[a]	SE = 0
WS = 0	WS = 0	WS = −0.137[d]	SS = 0.106[d]	SS = 0.167[a]
E = 0	E = 0	E = 0	R^2 = 0.48[a]	SW = 0.491[a]
SE = 0.150[c]	SE = 0	SE = 0.115[d]		R^2 = 0.46[a]
SS = 0	SS = 0.115[d]	SS = 0		N = 296
R^2 = 0.02[c]	R^2 = 0.01[d]	R^2 = 0.02[c]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.364[a]	SO = 0.168[a]
WS = 0	WS = 0	WS = −0.129[c]	SD = 0	SD = 0.129[b]
E = 0.178[a]	E = 0	E = 0.112[d]	SN = 0.178[a]	SN = 0
SE = 0	SE = 0	SE = 0	SP = 0.126[c]	SP = 0
SS = 0	SS = 0	SS = 0.163[b]	SH = −0.081[d]	SH = 0
R^2 = 0.03[a]	R^2 = 0	R^2 = 0.04[a]	SB = 0.190[a]	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.151[a]	SE = 0.160[a]
WS = 0	WS = 0	WS = 0	SS = 0	SS = 0
E = 0	E = 0	E = 0	R^2 = 0.49[a]	SW = 0.493[a]
SE = 0.257[a]	SE = 0	SE = 0.206[a]		R^2 = 0.53[a]
SS = 0	SS = 0.149[b]	SS = 0		N = 341
R^2 = 0.06[a]	R^2 = 0.02[b]	R^2 = 0.04[a]		

EXHIBIT A.4

Satisfaction with financial security

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.296[a]	A = −0.157[c]	A = −0.188[a]	SO = 0.245[a]	SO = 0.284[a]
WS = 0.179[b]	WS = 0	WS = 0	SD = 0.250[a]	SD = 0
E = 0	E = 0	E = 0	SN = 0.246[a]	SN = 0.172[a]
SE = 0	SE = 0	SE = 0	SP = 0	SP = −0.100[d]
SS = 0.122[d]	SS = 0	SS = 0	SH = 0	SH = −0.077[d]
R^2 = 0.11[a]	R^2 = 0.02[c]	R^2 = 0.03[a]	SB = 0.113[d]	SB = 0.153[b]
			A = 0.125[c]	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.234[a]	A = 0	A = −0.282[a]	SE = 0	SE = 0
WS = 0	WS = 0	WS = 0.171[b]	SS = 0	SS = 0
E = 0	E = 0	E = 0	R^2 = 0.42[a]	SW = 0.401[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.59[a]
SS = 0	SS = 0	SS = 0		N = 293
R^2 = 0.05[a]	R^2 = 0	R^2 = 0.08[a]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.176[a]	A = −0.182[a]	A = −0.109[d]	SO = 0.180[a]	SO = 0.200[a]
WS = 0.132[d]	WS = 0	WS = 0	SD = 0	SD = 0.120[c]
E = 0	E = 0	E = 0	SN = 0.415[a]	SN = 0.155[b]
SE = 0	SE = 0	SE = 0	SP = 0	SP = 0.128[b]
SS = 0	SS = 0	SS = 0	SH = 0	SH = 0
R^2 = 0.03[b]	R^2 = 0.03[a]	R^2 = 0.01[d]	SB = 0.225[a]	SB = 0
			A = 0.091[d]	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.136[c]	A = 0	A = −0.116[d]	SE = 0	SE = 0
WS = 0	WS = 0	WS = 0.182[a]	SS = 0.079[d]	SS = 0.112[b]
E = 0	E = 0	E = 0	R^2 = 0.51[a]	SW = 0.324[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.59[a]
SS = 0.211[a]	SS = 0.182[a]	SS = 0		N = 341
R^2 = 0.06[a]	R^2 = 0.03[a]	R^2 = 0.03[b]		

EXHIBIT A.5

Satisfaction with family relations

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.127[c]	A = 0	A = −0.123[c]	SO = 0.378[a]	SO = 0.160[a]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0	E = 0	E = 0	SN = 0.281[a]	SN = 0.173[a]
SE = 0	SE = 0	SE = 0	SP = 0	SP = 0
SS = 0.532[a]	SS = 0.443[a]	SS = 0.535[a]	SH = 0	SH = 0
R^2 = 0.31[a]	R^2 = 0.19[a]	R^2 = 0.32[a]	SB = 0.104[d]	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0	SE = 0
WS = 0	WS = 0	WS = 0	SS = 0.156[b]	SS = 0.485[a]
E = 0	E = 0	E = 0	R^2 = 0.57[a]	SW = 0.222[a]
SE = −0.122[d]	SE = 0	SE = 0		R^2 = 0.77[a]
SS = 0.413[a]	SS = 0.160[c]	SS = 0.358[a]		N = 290
R^2 = 0.15[a]	R^2 = 0.02[c]	R^2 = 0.13[a]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = −0.116[c]	SO = 0.300[a]	SO = 0.219[a]
WS = 0	WS = −0.148[b]	WS = 0	SD = 0.154[a]	SD = 0
E = 0	E = 0	E = 0	SN = 0.165[a]	SN = 0.085[c]
SE = 0	SE = 0	SE = 0	SP = 0	SP = 0
SS = 0.607[a]	SS = 0.468[a]	SS = 0.468[a]	SH = 0	SH = 0
R^2 = 0.37[a]	R^2 = 0.23[a]	R^2 = 0.23[a]	SB = 0	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0	SE = −0.069[c]
WS = 0	WS = −0.198[a]	WS = 0	SS = 0.340[a]	SS = 0.544[a]
E = 0	E = 0	E = 0	R^2 = 0.62[a]	SW = 0.215[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.81[a]
SS = 0.430[a]	SS = 0.189[a]	SS = 0.473[a]		N = 341
R^2 = 0.18[a]	R^2 = 0.07[a]	R^2 = 0.22[a]		

EXHIBIT A.6

Satisfaction with paid employment

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.377[a]	SO = 0.324[a]
WS = 0.478[a]	WS = 0	WS = 0.228[a]	SD = 0.168[c]	SD = 0
E = 0	E = 0	E = 0	SN = 0.171[d]	SN = 0
SE = 0	SE = 0	SE = 0	SP = 0	SP = 0
SS = 0.172[b]	SS = 0	SS = 0	SH = 0	SH = 0
R^2 = 0.26[a]	R^2 = 0	R^2 = 0.05[a]	SB = 0	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0.196[a]	WS = 0.240[a]
			E = 0	E = 0
A = 0	A = 0	A = −0.196[b]	SE = 0	SE = 0
WS = 0	WS = 0	WS = 0.387[a]	SS = 0	SS = 0
E = 0	E = 0	E = 0	R^2 = 0.49[a]	SW = 0.334[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.55[a]
SS = 0	SS = 0	SS = 0		N = 173
R^2 = 0	R^2 = 0	R^2 = 0.14[a]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.270[a]	A = −0.182[c]	A = −0.176[c]	SO = 0.228[a]	SO = 0.195[a]
WS = 0.529[a]	WS = 0.224[a]	WS = 0.319[a]	SD = 0.167[c]	SD = 0.188[a]
E = 0	E = 0	E = 0	SN = 0.326[a]	SN = 0
SE = 0	SE = 0	SE = 0	SP = 0	SP = 0
SS = 0	SS = 0	SS = 0	SH = 0	SH = 0.133[b]
R^2 = 0.27[a]	R^2 = 0.05[a]	R^2 = 0.10[a]	SB = 0	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0.203[a]	WS = 0.231[a]
			E = 0	E = 0
A = −0.152[d]	A = −0.126[d]	A = −0.270[a]	SE = 0	SE = 0
WS = 0.266[a]	WS = 0	WS = 0.595[a]	SS = 0	SS = 0.169[a]
E = 0	E = 0	E = 0	R^2 = 0.49[a]	SW = 0.369[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.68[a]
SS = 0.121[d]	SS = 0.163[b]	SS = 0		N = 192
R^2 = 0.08[a]	R^2 = 0.04[a]	R^2 = 0.34[a]		

EXHIBIT A.7

Satisfaction with friendships

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.387[a]	SO = 0.201[a]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0	E = 0	E = 0	SN = 0.087[d]	SN = 0
SE = 0.170[a]	SE = 0	SE = 0.190[a]	SP = 0.100[d]	SP = 0
SS = 0.547[a]	SS = 0.361[a]	SS = 0.413[a]	SH = 0	SH = 0
R^2 = 0.38[a]	R^2 = 0.13[a]	R^2 = 0.25[a]	SB = 0	SB = 0.101[b]
			A = 0.093[c]	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.122[b]	SE = 0
WS = 0	WS = 0	WS = 0	SS = 0.304[a]	SS = 0.528[a]
E = 0	E = 0	E = 0	R^2 = 0.60[a]	SW = 0.191[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.76[a]
SS = 0.348[a]	SS = 0	SS = 0.433[a]		N = 294
R^2 = 0.12[a]	R^2 = 0	R^2 = 0.19[a]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.331[a]	SO = 0.082[d]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0	E = 0	E = 0	SN = 0.147[b]	SN = 0
SE = 0.117[c]	SE = 0	SE = 0	SP = 0	SP = 0.104[b]
SS = 0.502[a]	SS = 0.417[a]	SS = 0.407[a]	SH = 0	SH = 0
R^2 = 0.30[a]	R^2 = 0.17[a]	R^2 = 0.16[a]	SB = 0.132[b]	SB = 0
			A = 0.081[d]	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = −0.204[a]	A = 0	SE = 0.104[c]	SE = 0
WS = 0	WS = 0	WS = 0.138[b]	SS = 0.237[a]	SS = 0.556[a]
E = 0	E = 0	E = 0	R^2 = 0.52[a]	SW = 0.284[a]
SE = 0.129[c]	SE = 0	SE = 0		R^2 = 0.74[a]
SS = 0.329[a]	SS = 0	SS = 0.408[a]		N = 345
R^2 = 0.15[a]	R^2 = 0.04[a]	R^2 = 0.19[a]		

EXHIBIT A.8

Satisfaction with housing

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.231[a]	A = 0	A = 0	SO = 0.369[a]	SO = 0.244[a]
WS = 0.186[a]	WS = 0	WS = 0	SD = 0.219[a]	SD = 0.175[a]
E = 0	E = 0	E = 0	SN = 0	SN = 0
SE = 0	SE = 0	SE = 0	SP = 0.184[a]	SP = 0
SS = 0.180[a]	SS = 0	SS = 0.154[c]	SH = 0	SH = 0
R^2 = 0.10[a]	R^2 = 0	R^2 = 0.02[c]	SB = 0	SB = 0
			A = 0	A = 0.098[d]
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.218[a]	A = 0	A = −0.169[c]	SE = 0	SE = 0
WS = 0.179[b]	WS = 0	WS = 0.120[d]	SS = 0	SS = 0.187[a]
E = 0	E = 0	E = 0.172[c]	R^2 = 0.38[a]	SW = 0.353[a]
SE = −0.138[c]	SE = 0	SE = 0		R^2 = 0.46[a]
SS = 0	SS = 0	SS = 0		N = 290
R^2 = 0.06[a]	R^2 = 0	R^2 = 0.04[b]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = −0.121[d]	SO = 0.295[a]	SO = 0.275[a]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0	E = 0	E = 0.167[b]	SN = 0.218[a]	SN = 0
SE = 0	SE = 0	SE = 0	SP = 0	SP = 0.183[a]
SS = 0.116[d]	SS = 0	SS = 0	SH = 0	SH = 0
R^2 = 0.01[d]	R^2 = 0	R^2 = 0.02[c]	SB = 0.236[a]	SB = 0
			A = 0.102[d]	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.214[a]	A = −0.106[d]	A = 0	SE = 0	SE = 0.111[c]
WS = 0	WS = 0	WS = 0	SS = 0	SS = 0.117[c]
E = 0.152[c]	E = 0	E = 0	R^2 = 0.36[a]	SW = 0.301[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.44[a]
SS = 0	SS = 0.127[d]	SS = 0		N = 341
R^2 = 0.04[a]	R^2 = 0.02[c]	R^2 = 0		

EXHIBIT A.9

Satisfaction with area lived in

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.118[d]	A = −0.200[a]	A = −0.188[b]	SO = 0.257[a]	SO = 0.228[a]
WS = 0	WS = 0.120[d]	WS = 0.141[d]	SD = 0	SD = 0.125[c]
E = 0	E = 0	E = 0	SN = 0.215[a]	SN = 0
SE = 0	SE = 0	SE = 0	SP = 0.275[a]	SP = 0
SS = 0.121[d]	SS = 0	SS = 0	SH = −0.095[d]	SH = 0
R^2 = 0.03[c]	R^2 = 0.04[b]	R^2 = 0.04[b]	SB = 0	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.176[b]	A = 0	A = 0	SE = 0	SE = 0
WS = 0	WS = −0.120[d]	WS = 0	SS = 0	SS = 0.225[a]
E = 0	E = 0	E = 0	R^2 = 0.35[a]	SW = 0.420[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.49[a]
SS = 0	SS = 0	SS = 0.125[d]		N = 291
R^2 = 0.03[b]	R^2 = 0.01[d]	R^2 = 0.01[d]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.208[a]	SO = 0.235[a]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0.125[d]	E = 0	E = 0	SN = 0.217[a]	SN = 0
SE = 0.125[d]	SE = 0	SE = 0	SP = 0	SP = 0.136[b]
SS = 0	SS = 0	SS = 0	SH = −0.171[a]	SH = 0
R^2 = 0.03[b]	R^2 = 0	R^2 = 0	SB = 0.352[a]	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.178[b]	A = −0.145[c]	A = 0	SE = 0	SE = 0
WS = 0	WS = 0	WS = 0	SS = 0	SS = 0.176[a]
E = 0.138[d]	E = 0	E = 0	R^2 = 0.41[a]	SW = 0.417[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.46[a]
SS = 0	SS = 0.114[d]	SS = 0		N = 343
R^2 = 0.03[b]	R^2 = 0.03[b]	R^2 = 0		

EXHIBIT A.10

Satisfaction with recreation activity

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.386[a]	SO = 0.355[a]
WS = 0	WS = 0	WS = 0	SD = 0.190[a]	SD = 0
E = 0	E = 0	E = 0	SN = 0	SN = 0
SE = 0.200[a]	SE = 0.215[a]	SE = 0.171[b]	SP = 0.154[c]	SP = 0
SS = 0.171[b]	SS = 0	SS = 0	SH = 0	SH = 0
R^2 = 0.09[a]	R^2 = 0.04[a]	R^2 = 0.03[b]	SB = 0.111[d]	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0	SE = 0.113[c]
WS = −0.120[d]	WS = 0	WS = 0	SS = 0	SS = 0.111[c]
E = 0	E = 0	E = 0	R^2 = 0.47[a]	SW = 0.377[a]
SE = 0.155[c]	SE = 0	SE = 0		R^2 = 0.53[a]
SS = 0	SS = 0	SS = 0		N = 295
R^2 = 0.03[b]	R^2 = 0	R^2 = 0		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.394[a]	SO = 0.200[a]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0.151[b]	E = 0	E = 0	SN = 0.124[c]	SN = 0.136[b]
SE = 0.161[b]	SE = 0	SE = 0	SP = 0.121[d]	SP = 0
SS = 0.231[a]	SS = 0.228[a]	SS = 0.241[a]	SH = 0	SH = 0
R^2 = 0.13[a]	R^2 = 0.05[a]	R^2 = 0.06[a]	SB = 0.180[a]	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = −0.111[d]	A = 0	SE = 0.170[a]	SE = 0
WS = 0	WS = 0	WS = 0	SS = 0	SS = 0.136[a]
E = 0	E = 0	E = 0	R^2 = 0.52[a]	SW = 0.478[a]
SE = 0.176[b]	SE = 0	SE = 0		R^2 = 0.58[a]
SS = 0.164[b]	SS = 0.109[d]	SS = 0.234[a]		N = 341
R^2 = 0.07[a]	R^2 = 0.02[c]	R^2 = 0.05[a]		

EXHIBIT A.11

Satisfaction with religion

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.433[a]	SO = 0.327[a]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0	E = 0	E = 0	SN = 0.332[a]	SN = −0.152[c]
SE = 0	SE = 0	SE = 0.260[a]	SP = 0	SP = 0
SS = 0.212[b]	SS = 0	SS = 0	SH = 0	SH = 0
R^2 = 0.04[b]	R^2 = 0	R^2 = 0.06[a]	SB = 0	SB = 0.189[a]
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0.105[c]
A = 0	A = 0	A = 0	SE = 0	SE = 0.108[c]
WS = 0	WS = 0	WS = 0	SS = 0.135[d]	SS = 0
E = 0	E = 0	E = 0	R^2 = 0.45[a]	SW = 0.531[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.70[a]
SS = 0.149[d]	SS = 0	SS = 0.207[b]		N = 173
R^2 = 0.02[d]	R^2 = 0	R^2 = 0.04[b]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.259[a]	SO = 0.400[a]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0	E = 0	E = 0	SN = 0.241[a]	SN = 0
SE = 0.275[a]	SE = 0	SE = 0	SP = 0	SP = 0.165[b]
SS = 0	SS = 0.184[b]	SS = 0.167[c]	SH = 0	SH = 0
R^2 = 0.07[a]	R^2 = 0.03[b]	R^2 = 0.02[c]	SB = 0.239[a]	SB = 0
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = −0.111[c]
A = 0	A = −0.142[d]	A = 0	SE = 0.184[a]	SE = 0.127[c]
WS = 0	WS = 0	WS = 0	SS = 0	SS = 0.103[d]
E = 0	E = 0	E = 0	R^2 = 0.45[a]	SW = 0.248[a]
SE = 0.157[d]	SE = 0	SE = 0		R^2 = 0.58[a]
SS = 0.165[c]	SS = 0	SS = 0.179[b]		N = 219
R^2 = 0.06[a]	R^2 = 0.02[d]	R^2 = 0.03[b]		

EXHIBIT A.12

Satisfaction with self-esteem

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.438[a]	SO = 0.228[a]
WS = 0	WS = 0	WS = 0	SD = 0.131[d]	SD = 0.170[a]
E = 0	E = 0	E = 0	SN = 0.151[d]	SN = 0
SS = 0.227[a]	SS = 0.134[d]	SS = 0.223[a]	SP = 0	SP = 0
R^2 = 0.05[a]	R^2 = 0.02[d]	R^2 = 0.05[a]	SH = 0	SH = −0.096[d]
			SB = 0	SB = 0
Self-Progress	Self-Future	Self-Best	A = 0	A = 0
			WS = 0	WS = 0
A = 0	A = 0	A = 0	E = 0	E = 0
WS = 0	WS = −0.134[d]	WS = 0	SS = 0.094[d]	SS = 0.160[a]
E = 0	E = 0	E = 0	R^2 = 0.42[a]	SW = 0.400[a]
SS = 0.156[c]	SS = 0	SS = 0.174[b]		R^2 = 0.54[a]
R^2 = 0.02[c]	R^2 = 0.02[d]	R^2 = 0.03[b]		N = 293

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.247[a]	SO = 0.305[a]
WS = 0	WS = 0	WS = −0.123[d]	SD = 0.143[d]	SD = 0
E = 0	E = 0	E = 0	SN = 0.314[a]	SN = 0
SS = 0.294[a]	SS = 0.198[a]	SS = 0.276[a]	SP = 0	SP = 0
R^2 = 0.08[a]	R^2 = 0.04[a]	R^2 = 0.08[a]	SH = 0	SH = 0
			SB = 0.154[a]	SB = 0
Self-Progress	Self-Future	Self-Best	A = 0.146[a]	A = 0
			WS = 0	WS = 0
A = 0	A = 0	A = 0.129[c]	E = 0	E = 0
WS = 0	WS = 0	WS = 0	SS = 0.089[d]	SS = 0.115[b]
E = 0	E = −0.134[c]	E = 0	R^2 = 0.54[a]	SW = 0.491[a]
SS = 0.291[a]	SS = 0.140[c]	SS = 0.285[a]		R^2 = 0.61[a]
R^2 = 0.08[a]	R^2 = 0.03[b]	R^2 = 0.09[a]		N = 340

EXHIBIT A.13

Satisfaction with transportation

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = −0.213[a]	A = 0	A = −0.193[a]	SO = 0.258[a]	SO = 0.282[a]
WS = 0.188[b]	WS = 0.160[c]	WS = 0.222[a]	SD = 0	SD = 0
E = 0	E = 0	E = 0	SN = 0.230[a]	SN = 0.176[b]
SE = 0	SE = 0	SE = 0	SP = 0.168[b]	SP = 0
SS = 0	SS = 0	SS = 0	SH = 0	SH = 0
R^2 = 0.05[a]	R^2 = 0.02[c]	R^2 = 0.06[a]	SB = 0.205[a]	SB = 0
			A = 0.103[d]	A = 0.083[d]
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = −0.244[a]	A = 0	A = −0.276[a]	SE = 0	SE = 0.117[b]
WS = 0.119[d]	WS = −0.133[d]	WS = 0.213[a]	SS = 0	SS = 0
E = 0	E = 0	E = 0	R^2 = 0.48[a]	SW = 0.377[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.52[a]
SS = 0	SS = 0	SS = 0		N = 285
R^2 = 0.05[a]	R^2 = 0.01[d]	R^2 = 0.08[a]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.247[a]	SO = 0.243[a]
WS = 0	WS = 0	WS = 0	SD = 0.143[d]	SD = 0.177[a]
E = 0	E = 0	E = 0	SN = 0.314[a]	SN = 0
SE = 0	SE = −0.119[d]	SE = −0.157[b]	SP = 0	SP = 0
SS = 0	SS = 0	SS = 0	SH = 0	SH = 0
R^2 = 0	R^2 = 0.01[d]	R^2 = 0.02[b]	SB = 0.154[a]	SB = 0
			A = 0.146[a]	A = 0.092[c]
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.089[d]	SE = 0.169[a]
WS = 0	WS = 0	WS = 0.130[c]	SS = 0	SS = 0
E = 0	E = 0	E = 0	R^2 = 0.54[a]	SW = 0.415[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.57[a]
SS = 0	SS = 0.174[a]	SS = 0		N = 336
R^2 = 0	R^2 = 0.03[a]	R^2 = 0.01[c]		

EXHIBIT A.14

Satisfaction with education

Males

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.218[a]	SO = 0.158[b]
WS = 0	WS = 0	WS = 0	SD = 0	SD = 0
E = 0.172[b]	E = 0	E = 0	SN = 0.291[a]	SN = 0
SE = 0.178[b]	SE = 0	SE = 0	SP = 0	SP = 0
SS = 0	SS = 0.155[c]	SS = 0.149[c]	SH = 0	SH = 0
R^2 = 0.06[a]	R^2 = 0.02[c]	R^2 = 0.02[c]	SB = 0.191[a]	SB = 0.205[a]
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0	SE = 0
WS = 0	WS = −0.239[a]	WS = 0	SS = 0	SS = 0.251[a]
E = 0	E = 0	E = 0	R^2 = 0.26[a]	SW = 0.286[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.34[a]
SS = 0.130[d]	SS = 0	SS = 0.130[d]		N = 295
R^2 = 0.01[d]	R^2 = 0.05[a]	R^2 = 0.01[d]		

Females

Self-Others	Self-Deserved	Self-Needs	Self-Wants	Satisfaction
A = 0	A = 0	A = 0	SO = 0.151[b]	SO = 0.209[a]
WS = 0	WS = 0	WS = 0	SD = 0.183[b]	SD = 0
E = 0.191[a]	E = 0	E = 0	SN = 0.310[a]	SN = 0.130[c]
SE = 0.232[a]	SE = 0	SE = 0	SP = 0	SP = 0.111[d]
SS = 0	SS = 0	SS = 0.112[d]	SH = 0	SH = 0
R^2 = 0.09[a]	R^2 = 0	R^2 = 0.01[d]	SB = 0	SB = 0.153[b]
			A = 0	A = 0
Self-Progress	Self-Future	Self-Best	WS = 0	WS = 0.095[c]
			E = 0	E = 0
A = 0	A = 0	A = 0	SE = 0.149[b]	SE = 0
WS = 0	WS = 0	WS = 0	SS = 0	SS = 0.092[d]
E = 0	E = 0	E = 0	R^2 = 0.28[a]	SW = 0.258[a]
SE = 0	SE = 0	SE = 0		R^2 = 0.37[a]
SS = 0	SS = 0	SS = 0		N = 341
R^2 = 0	R^2 = 0	R^2 = 0		

[a] $P \leq 0.001$
[b] $P \leq 0.005$
[c] $P \leq 0.01$
[d] $P \leq 0.05$
0 Significance level too low to enter equation.

APPENDIX B

Definitions

Health	The present state of your general, overall health (relatively free of common and chronic illnesses).
Financial security	How well your income (including investments, property, etc.) takes care of your daily needs and provides funds for unexpected or unplanned expenses.
Family relations	Kind of contact and frequency of contact you have with your family members. This includes personal contact, phone calls, and letters.
Paid employment	Any work for wages, salaries or fees.
Friendship	Kind of contact and frequency of contact you have with your friends. This includes personal contact, phone calls, and letters.
Housing	The present type, atmosphere and state of the home you live in at the time. Suitability of the home (e.g., apartment, house, farm, room, etc.).
Area you live in	The general place in which you live, including climate, location and lifestyle.
Recreation activity	Personal recreation activities you engage in for pure pleasure when you are not doing normal daily chores or some type of work. This includes relaxing, reading, T.V., regular get togethers, church activities, arts and crafts, exercises, trips, etc.
Religion	Your spiritual fulfillment.
Self-Esteem	How good you feel about yourself; your sense of self-respect.
Transportation	In general, how well public and private transportation meets your needs (e.g., convenience, expense).
Education	Your formal education as provided in the university you are presently attending.
No opinion	This is a catch-all box covering not applicable, can't remember, no comment, etc.

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NOTE

[1] My colleague, Dr. Linda Wood, pointed this out after most of the data for this study were collected.

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