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INTRINSIC AND EXTRINSIC GOALS:
THEIR STRUCTURE AND RELATIONSHIP TO WELL-BEING
IN GERMAN AND U.S. COLLEGE STUDENTS

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ABSTRACT. Aspirations for intrinsic (e.g., self-acceptance, affiliation, community feeling) versus extrinsic (e.g., financial success, appearance, social recognition) goals were examined in German and U.S. college students. The structure of students' goal-systems in terms of goal content was remarkably similar in the two cultures, as evidenced by examination of the ordering of goals. Also, as in past work in the U.S., German college students who were especially focused on intrinsic goals had high well-being, whereas the reverse was true for a focus on extrinsic goals. Some differences between the cultures in terms of specific goals are also discussed.

Recent work in the United States has suggested that some of the goals proffered by free-market economy cultures as worthwhile are actually associated with lower levels of well-being when they are highly valued. For example, Kasser and Ryan (1993, 1996, in press) have shown in a series of studies that people whose system of goals is strongly focused on financial success, attractiveness, and popularity have relatively low levels of well-being and happiness. In contrast, Kasser and Ryan have found that people oriented toward goals such as self-acceptance, affiliation, community feeling, and physical fitness generally have higher levels of well-being. Other work by Cohen and Cohen (1996) has shown that adolescents especially oriented to wealth and financial success have a higher susceptibility to several psychological disorders. Similar findings have also been reported by Sheldon and Kasser (1995, 1998), Lapierre et al. (1997), and Dykman (1998).

As a way of understanding these results, Kasser and Ryan (1996) suggested that goals can be classified on the basis of their content into two types, intrinsic and extrinsic. *Intrinsic* goals (e.g., self-



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acceptance, affiliation, community feeling, and physical fitness) are those which are inherently satisfying to pursue because they are likely to satisfy innate psychological needs for autonomy, relatedness, competence, and growth (Deci and Ryan, 1985; Maslow, 1954; Rogers, 1961). For example, when individuals pursue and make progress at such intrinsic goals, they have experiences along the way which satisfy their needs and thus help to support their happiness and well-being (Ryan et al., 1996). In contrast, extrinsic goals (e.g., financial success, attractiveness, and popularity) are focused on obtaining rewards and the positive evaluations of others. Such goals generally reflect a sense of insecurity about oneself (Kasser et al., 1995) and also lead one to engage in more stressful, ego-involved, and controlled behavior which does not satisfy one's needs (Kasser & Ryan, 1996; Sheldon & Kasser, 1995). Thus, when individuals are especially oriented toward extrinsic goals, they are likely to ignore their needs and to engage in activities which work against their health and well-being. This theoretical distinction between intrinsic and extrinsic goals has received substantial empirical support through both factor analysis and associations with a variety of outcomes (see Kasser, in press, for a review).

Because the interpretations mentioned above stem primarily from an organismic viewpoint (Deci and Ryan, 1985; Fromm, 1976; Maslow, 1954; Rogers, 1961), cross-cultural replications of past findings concerning aspirations are important to obtain. This is because the organismic perspective suggests that all people have inherent psychological needs which must be satisfied in order for well-being to occur (Ryan, 1995). Goals and values are vehicles through which people's needs get satisfied (Rokeach, 1973; Schwartz, 1992), and some may be more conducive (or antagonistic) to need satisfaction than others. Although some goals have varied meanings in different cultures (e.g., a goal of conformity may mean community integration in Eastern cultures but loss of autonomy in Western cultures) other goals and values may have somewhat similar relations with needs cross-culturally. That is, there may be some goals which will cross-culturally be associated with higher or lower well-being because their relationships with need satisfaction are relatively clear. Other goals may have different relationships

with need fulfillment in different cultural contexts, and thus would not show generalizable patterns. The intrinsic and extrinsic goals we measured herein were in part selected because we have hypothesized that they will have similar effects in the two cultures we studied.

These predictions deriving from an organismic perspective stand in contrast to a more social-constructionist viewpoint which suggests that any goal or value can be easily incorporated into individuals' self-concepts, and that it is primarily successful pursuit of such goals which leads to well-being (e.g., Brunstein, 1993; Carver et al., 1996; Markus and Nurius, 1986). Such a view suggests that goal configurations might vary across cultures dependent on differences in social organization, and that the goals which might be negatively related to well-being in one culture may not be in another. In a sense, the organismic perspective is a more "universal" one which suggests that all people have certain needs which must be satisfied, while the social constructionist viewpoint is more "relativistic" in that any goal or value has the potential to lead to well-being.

The current study will test an aspect of the organismic claim by examining aspirations and well-being in college students from two cultures, the United States and Germany. Germany and the United States are interesting cultures to compare because, although they share much in common, they also have some interesting differences. In terms of similarities, Germany and the U.S. share strong free-market economies, democratic governments, and similar linguistic roots. In terms of differences, Germany is less ethnically heterogeneous, less capitalistic, and less individualistic, but has experienced more national upheaval in recent years than the U.S. We chose Germany as a good comparison culture to the United States because its similarities increased the likelihood of replication, while its differences would help show the generalizability of previous results.

Three hypotheses predicted that results in this German sample would replicate what has been previously found in the United States. First, higher-order factor analyses of aspirations of German subjects should yield a two-factor solution corresponding to intrinsic and extrinsic goals. As with other work on the structure of values

(i.e., Schwartz, 1992), such a finding would support the notion that values cohere in similar manners across cultures. Second, we hypothesize that individuals will generally value intrinsic goals at a higher level than extrinsic goals, in both U.S. and German samples. This would support the organismic view that the needs represented by intrinsic goals are prominent cross-culturally, and are not just culturally manufactured. Third, we hypothesize that the pattern of correlations of well-being with intrinsic and extrinsic goals will be similar in Germany to what has been found in past research in the U.S. That is, we expect that a relative focus on intrinsic goals will be associated with greater well-being, whereas a relative focus on extrinsic goals will be associated with lower well-being.

A final purpose of this study is to examine potential differences between the U.S. and Germany in terms of the aspirations their citizens espouse. Because the U.S. is generally a very consumeristic culture in terms of its exposure to advertising and the myths suggesting that wealth and status are highly important (Astin, 1998; Murphy and Miller, 1997), students from the United States may rate extrinsic goals higher than Germans. Correspondingly, it may be that Germans, with their longer history and more homogenous society, feel more connection with others and thus score higher on intrinsic goals. Germans may also be less extrinsically oriented, given that they are less likely to live in single parent families than U.S. citizens (6% of German children live in single parent families, Bertram, 1995: p. 20; as compared to 26% in the US, Bird and Melville, 1994: p. 404) and divorce has been shown to relate to a greater focus on materialistic goals (Rindfleisch et al., 1997). We explore these possibilities in the study that follows.

METHODS

Subjects. The German sample consisted of 83 students (32 male, 51 female) at the University of Goettingen in Germany who volunteered to participate. 41 were students of psychology, 12 were in law and economics, and 30 were students of natural science. A comparison sample of 125 students from the University of Rochester in the

United States was used to test several of the comparative hypotheses. This was sample 1 of Kasser and Ryan (in press).

Procedures. All surveys were translated from English into German by the first author. Back-translations of the German survey by a U.S. citizen not associated with this research project suggested that the items adequately represented the English items. Items were compiled into a packet of questionnaires and administered individually to subjects. For the U.S. sample, the surveys were administered in small groups, and subjects received credit toward course requirements for participating.

Measures.

Aspiration Index (Kasser and Ryan, 1996). Subjects were presented with 32 stems concerning future states and asked to rate the importance that they be attained and the likelihood that they would be attained. Both sets of ratings were made on a 5-point scale. The Aspiration Index has been used in several studies, demonstrating adequate internal reliability (Kasser and Ryan, 1996) and test-retest stability (Ryan, 1997). Further, work in the United States has shown in three samples that factor analyses for both importance and likelihood dimensions yield two factors corresponding to intrinsic and extrinsic goals (Kasser and Ryan, 1996, in press).

The Aspiration Index yields importance and likelihood ratings for seven different types of goals: self-acceptance (e.g., personal growth and choice), affiliation (e.g., intimacy, close relationships), community feeling (e.g., helping the world be a better place), physical fitness (e.g., being healthy), financial success (e.g., having many material possessions and much wealth), attractive appearance (e.g., being good-looking), and social recognition (e.g., being popular and admired). Further, *total importance* and *likelihood* scores can be calculated by averaging ratings across all seven domains. In order to assess the relative centrality of individual goals, this total score is subtracted from each individual subscale score (for a given dimension). For example, to assess the relative importance of community feeling to a subject, his/her total importance score is subtracted from his/her community feeling importance subscale score, resulting in a *mean-corrected subscale score* (see Kasser and Ryan, in press). These mean-corrected scores are then used for

correlations and comparisons. Scores which have not been mean-corrected may reflect a general tendency on the part of subjects to view all goals as important or likely to be attained; such a tendency is in itself associated with higher well-being (e.g., Emmons, 1986). Because our hypotheses concern specific goals contents, it is important to control for this general tendency by using the mean-corrected scores.

Well-Being. Several scales were used to assess well-being. These included the 15-item Jones and Crandall (1986) Self-Actualization Scale, the 7-item Ryan and Frederick (1997) Subjective Vitality Scale, the 20-item German version of Radloff's (1977) Center For Epidemiological Studies Depression Survey (Hautzinger, 1988), the 20-item State-Trait Anxiety Inventory (Spielberger et al., 1980), and a 9-item physical symptoms checklist adapted from Pennebaker (1982). In order to obtain a summary well-being score, total scores from these five scales were standardized and then combined by subtracting the negatively from the positively valenced measures.

RESULTS

Similarities between Cultures

To test our first hypothesis that the goals measured by the Aspiration Index are of two basic types, we conducted a higher-order confirmatory factor analysis of German ratings on the seven aspiration domains (not mean-corrected), by forcing a two factor solution. For both importance and likelihood ratings, a two factor solution was successful, as for both sets of ratings, factors with eigenvalues greater than 1 were obtained. 54.4% of the variance was accounted for by the two factors for importance ratings, while 55.1% was accounted for in the likelihood ratings. Also, as can be seen in Table I, the loadings are quite similar to those reported in the United States by Kasser and Ryan (1996). For importance ratings, the three extrinsic goals formed a clear first factor, while three of the intrinsic goals formed the second factor; physical fitness, however, showed substantial cross-loading. For likelihood ratings, the pattern was similar, only both financial success and physical

TABLE I
Higher-order Factor Analyses of Aspirations in
German College Students

	Factor 1	Factor 2
<i>Importance Ratings</i>		
Self-Acceptance	0.17	0.70
Affiliation	0.07	0.73
Community Feeling	-0.12	0.70
Physical Fitness	0.39	0.38
Appearance	0.85	0.01
Financial Success	0.75	0.11
Social Recognition	0.81	0.01
<i>Likelihood Ratings</i>		
Self-Acceptance	0.64	0.14
Affiliation	0.82	-0.19
Community Feeling	0.68	0.16
Physical Fitness	0.46	0.34
Appearance	0.01	0.83
Financial Success	0.54	0.44
Social Recognition	0.16	0.83

fitness cross-loaded between the otherwise intrinsic and extrinsic factors.

Despite the cross-loading, and in order to maintain comparability of the U.S. sample with this German sample, we computed summary *intrinsic* and *extrinsic* scores for both importance and likelihood ratings by averaging the relevant subscales (i.e., self-acceptance, affiliation, community feeling, and physical fitness for intrinsic, and financial success, social recognition and appearance for extrinsic). Notably, no effects of gender or major in school were detected on the importance the German subjects placed on these two sets of values.

Next we examined our second hypothesis, that in both cultures intrinsic aspirations would be rated as more important than extrinsic aspirations, reflecting the organismic assumption that the former set

TABLE II

Means and Standard Deviations comparing Intrinsic, Extrinsic, and Total Importance and Likelihood Scores in Germany and the U.S.

	Germany		U.S.	
	Mean	SD	Mean	SD
<i>Importance</i>				
Intrinsic	4.12	0.34	4.55	0.36
Extrinsic	2.53	0.56	3.18	0.83
Total	3.44	0.34	3.97	0.44
<i>Likelihood</i>				
Intrinsic	3.43	0.38	4.07	0.54
Extrinsic	2.51	0.43	3.21	0.60
Total	3.04	0.34	3.70	0.49

of goals reflects inherent psychological needs common to individuals of all cultures. As can be seen in Table II, the data strongly support our supposition. Intrinsic aspirations were rated as more important than extrinsic aspirations in both Germany ($t(82) = 24.03$, $p < 0.001$) and the U.S. ($t(119) = 17.50$, $p < 0.001$); the same was true for likelihood ratings in both Germany ($t(82) = 18.25$, $p < 0.001$) and the U.S. ($t(124) = 16.43$, $p < 0.001$).

Our third hypothesis was that individuals relatively highly oriented toward intrinsic goals would experience higher levels of well-being, while those people oriented toward extrinsic goals would have relatively lower well-being. In order to assess subjects' orientation toward these two types of goals, we computed "relative intrinsic" orientation scores for both importance and likelihood ratings by subtracting each subject's summary extrinsic score from his/her intrinsic score. High scores thus reflect a highly intrinsic person, while low scores reflect an extrinsically oriented person. Table III presents the correlations computed to test this hypothesis in the German sample, as the finding has been well-documented in the U.S. (Kasser and Ryan, 1993, 1996) and the correlations for

TABLE III

Correlations between Summary Aspiration Scores and Well-being for the German Sample

	Relative intrinsic importance	Relative intrinsic likelihood
Total well-being	0.26*	0.32**
Self-actualization	0.35**	0.29**
Vitality	0.01	0.06
Anxiety	-0.25*	-0.28*
Depression	-0.11	-0.18
Physical symptoms	-0.17	-0.27*

Note: * = $p < 0.05$; ** = $p < 0.01$.

the current U.S. sample have been reported in Kasser and Ryan (in press). Ratings of the relative importance of intrinsic goals were significantly positively correlated with total well-being and self-actualization, and significantly negatively correlated with anxiety. High relative likelihood ratings of intrinsic goals were significantly positively associated with overall well-being and self-actualization, and significantly negatively correlated with anxiety and physical symptomatology.¹ Thus, insofar as one's efficacy is strong regarding extrinsic relative to intrinsic goals, one's well-being is lower, supporting our prediction.

Differences between the Cultures

Finally, we turned to an examination of the differences between the German and U.S. samples. As seen in Table IV, U.S. students rated both the importance and likelihood of all aspirations, regardless of content, higher than did German students. This is one important reason to compare the mean-corrected subscale scores, as this computational procedure controls for general rating differences. That is, if we compared the raw subscale scores between German students and American students, we would not know whether differences on particular subscales were due to a general reporting tendency that goes across all goals, or whether differences were specific to certain goals.

TABLE IV
Means, Standard Deviations, and t-tests Comparing Mean-corrected Aspirations of German and U.S. Students

	Germany		U.S.		t
	M	SD	M	SD	
<i>Importance</i>					
Total	3.44	0.34	3.97	0.44	-9.23**
Intrinsic	0.68	0.26	0.59	0.37	1.91 ⁺
Extrinsic	-0.91	0.34	-0.78	0.49	-2.09*
Affiliation	1.09	0.39	0.78	0.44	5.17**
Self-Acceptance	0.94	0.40	0.76	0.46	2.89**
Physical Fitness	0.80	0.41	0.61	0.46	3.02**
Community Feeling	-0.10	0.61	0.20	0.66	-3.28**
Financial Success	-0.51	0.47	-0.45	0.69	-0.69
Appearance	-0.88	0.57	-0.84	0.59	-0.48
Social Recognition	-1.33	0.51	-1.07	0.75	-2.75**
<i>Likelihood</i>					
Total	3.04	0.34	3.70	0.49	-10.63**
Intrinsic	0.39	0.20	0.37	0.25	0.61
Extrinsic	-0.52	0.26	-0.49	0.34	-0.68
Affiliation	0.88	0.48	0.70	0.43	2.82**
Self-Acceptance	0.59	0.42	0.48	0.40	1.90 ⁺
Physical Fitness	0.25	0.42	0.16	0.46	1.43
Community Feeling	-0.14	0.51	0.14	0.54	-3.74**
Appearance	-0.31	0.42	-0.57	0.51	3.86**
Financial Success	-0.31	0.38	-0.05	0.48	-4.15**
Social Recognition	-0.95	0.47	-0.86	0.58	-1.18

Note: DF for importance is 218, for likelihood is 223. For two-tailed test, ⁺ = $p < 0.10$, * = $p < 0.05$, ** = $p < 0.01$.

Thus, the bulk of Table IV reports differences between the two cultures on mean-corrected scores. There was a marginal difference in the importance of intrinsic goals between the two cultures, with German students being somewhat higher than American students, and a significant difference on the importance of extrinsic goals, with American students being higher than German students. No differences on likelihood ratings emerged, however.

Turning now to the specific intrinsic subscales, German students were significantly higher than American students on both importance and likelihood ratings for affiliation, and on the importance of self-acceptance and physical fitness, while American students were higher than German students on the importance and likelihood of community feeling aspirations. As for the extrinsic goals, American students rated the importance of social recognition significantly higher, and rated their chances of financial success greater than did German students, while German students rated the likelihood of attaining appearance aspirations significantly higher than did American students.

DISCUSSION

This study set out to examine the cross-cultural replicability of some recent claims made about people's values and goals. Kasser and Ryan (1993, 1996, in press) have suggested that, in terms of content, goals can be classified as either intrinsic or extrinsic. Intrinsic goals (self-acceptance, affiliation, community feeling, and physical fitness) have been proposed to reflect inherent psychological needs and growth tendencies of all people, and, as such, are associated with greater psychological well-being when they are pursued. In contrast, extrinsic goals (financial success, attractive appearance, social recognition) are concerned with gaining rewards or approval, and are associated with lower well-being.

Much of the data collected in these two samples was supportive of these propositions. First, there was a remarkable similarity in the ordering of goals between the two cultures in terms of both importance and likelihood ratings, as reported in Table IV. The ordering of goals was almost identical in the two cultures, and in both cultures the four intrinsic goals were more highly valued and

rated as more likely to be obtained than were the three extrinsic goals. While this finding supports our proposition that people are highly likely to focus on intrinsic goals because such goals reflect inherent psychological needs common to all humans, it should be noted that this conclusion is based on small, student samples from only two cultures, and awaits replication with more heterogeneous groups of individuals.

A second way in which support was garnered for the organismic perspective on goals and values comes from the finding that German college students especially focused on intrinsic goals reported greater psychological well-being, while a focus on extrinsic goals was associated with lower well-being. This replicates past research in the United States (Kasser and Ryan, 1993, 1996, *in press*). If intrinsic goals actually do reflect people's psychological needs, and people's needs must be satisfied in order for them to be happy and adjusted, it makes sense that pursuit of such goals provides well-being. This finding may also have occurred because extrinsic goals lead people to engage in more controlled, stressful, and ego-involved activities, which are unlikely to support health and are likely to distract individuals from pursuing the intrinsic goals which might bring them happiness. Another reason for this finding may be that extrinsic goals are symptomatic of a broader neurotic or insecure style, and thus may be associated with lower well-being because of this greater insecurity. Of course, it is also possible that the causal influence flows in the other direction, and that people who are low in well-being orient to extrinsic goals and away from intrinsic goals.

Although we found substantial similarities between the two cultures in their ratings of the two sets of goals and the relationships of the goals to well-being, there were some notable differences as well. First, factor analyses of the seven goals found a pattern which did not completely replicate that found in the United States. While extrinsic goals did generally form a single factor, the pattern for intrinsic goals was not exactly the same as in past work. The results were somewhat suggestive that the intrinsic goal of physical fitness may be more distinct from other intrinsic goals within the German sample than it is in U.S. samples to date. Further work

in other cultures is warranted to determine whether this pattern replicates.

There were also a variety of differences between the cultures in terms of the subjects' orientation to the goals. First, as predicted, German students were somewhat less extrinsically oriented than U.S. students, perhaps because of the high level of consumer culture found in the U.S. (Murphy and Miller, 1997). However, German students were not found to be more intrinsically oriented, though the mean differences were in the expected direction. The reason we failed to find such a difference becomes clearer when the specific goals which make up these summary variables are examined. That is, for some intrinsic goals American students are higher than German students, and vice versa for others. Specifically, German students were more affiliation oriented, consistent with the notion that their kin networks have remained fairly well-developed compared to the destruction that has occurred in the U.S. due to divorce and a highly mobile society (Bird and Melville, 1994). German students were also more oriented toward physical health, perhaps as one way to attain the appearance aspirations which they were also particularly concerned with. In contrast, American students were higher than German students in their values for community. This was rather surprising, but may be a result of the immense changes that have occurred in the last decade in Germany, as the barriers between the Eastern and Western parts of Europe fell and thousands of refugees from the Balkans have entered the country. German students may therefore be somewhat wary of helping others, as they are rather confused as to who is a member of their community and who is not. American students were also rather focused on social recognition, perhaps reflecting the individualism of the country, and they were more optimistic than German students regarding the attainment of wealth. This latter finding may reflect both the highly consumeristic culture of the U.S. and the difficulties Germany is experiencing with regard to full employment of its populace (Fischer and Muenchmeyer, 1997).

There are a variety of limitations to this study, including its correlational nature and its reliance on self-report measures. Further, the fact that only college students were sampled in two cultures

limits the generalizability of the findings. However, it is unlikely that the relative youth of our subjects is responsible for their higher valuing of intrinsic than extrinsic goals, as both Kasser and Ryan (1996) and Schmuck (1999) found that age is negatively correlated with a focus on extrinsic goals. Further, in other samples of adults, age has not been found to interact with goal orientation in the prediction of well-being (Kasser and Ryan, 1996). A third limitation of this study is that only seven goal and value contents were sampled, thereby restricting the range of important values that people hold. Future work should include more values in their assessments. More problematic is the fact that although the German and U.S. cultures are surely distinct, they share a great many characteristics as well, including heritage, economy, and political organization. Thus, the similarities between the two samples in terms of goals and their relationships with well-being may still be basically cultural in nature, and have less to do with commonalities among individuals which transcend culture. In other words, it may be that the similarities in aspirational structure or relationships between aspirations and well-being are still the result of similar cultural organizations, rather than the presence of inherent psychological needs. Further work examining other cultures is in progress (e.g., Ryan et al., in press).

Despite these limitations, the findings of this study do support the propositions that a focus on intrinsic goals is associated with greater well-being, while a focus on extrinsic goals is associated with poorer adjustment and mental health. It would thus appear that for both German and U.S. students the pursuit of happiness is best engaged through pursuing intrinsic goals that concern self-acceptance, affiliation, and community feeling rather than extrinsic goals focused on financial success, appearance, and popularity.

NOTE

¹ Hierarchical multiple regressions were conducted to determine whether any of these findings interacted with sex of subject. Only one significant result was obtained, such that males who were low in the relative importance of intrinsic aspirations had especially high depression ($p < 0.05$).

REFERENCES

- Astin, A. W.: 1998, 'The changing American college student: Thirty-year trends, 1966–1996', *The Review of Higher Education* 21, pp. 115–135.
- Bertram, H.: 1995, 'Individuen in einer individualisierten Gesellschaft', in H. Bertram (ed.), *Das Individuum und seine Familie* (Leske & Budrich, Opladen), pp. 9–33.
- Bird, G. and K. Melville: 1994, *Families and Intimate Relationships* (McGraw Hill, New York).
- Brunstein, J.: 1993, 'Personal goals and subjective well-being: A longitudinal study', *Journal of Personality and Social Psychology* 65, pp. 1061–1070.
- Carver, C. S., J. W. Lawrence and M. F. Scheier: 1996, 'A control process perspective on the origins of affect', in L. L. Martin and A. Tesser (eds.), *Striving and Feeling: Interactions among Goals, Affect and Self-regulation* (Lawrence Erlbaum, Mahwah, NJ), pp. 11–52.
- Cohen, P. and J. Cohen: 1996, *Life Values and Adolescent Mental Health* (Lawrence Erlbaum, Mahwah, NJ).
- Deci, E. L. and R. M. Ryan: 1985, *Intrinsic Motivation and Self-determination in Human Behavior* (Plenum, New York).
- Dykman, B. M.: 1998, 'Integrating cognitive and motivational factors in depression: Initial tests of a goal-orientation approach', *Journal of Personality and Social Psychology* 74, pp. 139–158.
- Emmons, R. A.: 1986, 'Personal strivings: An approach to personality and subjective well-being', *Journal of Personality and Social Psychology* 51, pp. 1058–1068.
- Fischer, A. and R. Muenchmeyer (eds.): 1997, *Jugend 1997 – Zukunftsperspektiven – Gesellschaftliches Engagement – Politische Orientierungen* (Leske & Budrich, Leverkusen).
- Fromm, E.: 1976, *To Have or to Be?* (Harper & Row, New York).
- Hautzinger, M.: 1988, 'Die CES-D Skala. Ein Depressionsmessinstrument fuer Untersuchungen in der Allgemeinbevoelkerung', *Diagnostica* 2, pp. 167–173.
- Jones, A. and R. Crandall: 1986, 'Validation of a short index of self-actualization', *Personality and Social Psychology Bulletin* 12, pp. 63–73.
- Kasser, T.: in press, 'Two versions of the American dream: Which goals and values make for a high quality of life?', in E. Diener and D. Rahtz (eds.), *Advances in Quality of Life Theory and Research* (Kluwer, Dordrecht, Netherlands).
- Kasser, T. and R. M. Ryan: 1993, 'A dark side of the American dream: Correlates of financial success as a central life aspiration', *Journal of Personality and Social Psychology* 65, pp. 410–422.
- Kasser, T. and R. M. Ryan: 1996, 'Further examining the American dream: Differential correlates of intrinsic and extrinsic goals', *Personality and Social Psychology Bulletin* 22, pp. 280–287.

- Kasser, T. and R. M. Ryan: in press, 'Be careful what you wish for: Optimal functioning and the relative attainment of intrinsic and extrinsic goals', in P. Schmuck (ed.), *Life Goals and Well-being* (Pabst Science Publishers).
- Kasser, T., R. M. Ryan, M. Zax and A. J. Sameroff: 1995, 'The relations of maternal and social environments to late adolescents' materialistic and prosocial aspirations', *Developmental Psychology* 31, pp. 907–914.
- Lapierre, S., L. Bouffard and E. Bastin: 1997, 'Personal goals and subjective well-being in later life', *International Journal of Aging and Human Development* 45, pp. 287–303.
- Markus, H. J. and P. S. Nurius: 1986, 'Self-understanding and self-regulation in middle childhood', in W. A. Collins (ed.), *Development During Middle Childhood* (National Academy Press, Washington DC), pp. 147–183.
- Maslow, A. H.: 1954, *Motivation and Personality* (Harper & Row, New York).
- Murphy, P. L. and C. T. Miller: 1997, 'Post-decisional dissonance and the commodified self-concept: A cross-cultural examination', *Personality and Social Psychology Bulletin* 23, pp. 50–62.
- Pennebaker, J. W.: 1982, *The Psychology of Physical Symptoms* (Springer Verlag, New York).
- Rindfleisch, A., J. E. Burroughs and F. Denton: 1997, 'Family structure, materialism, and compulsive consumption', *Journal of Consumer Research* 23, pp. 312–325.
- Radloff, L.: 1977, 'The CES-D scale: A self-report depression scale for research in the general population', *Applied Psychological Measurement* 1, pp. 385–401.
- Rogers, C.: 1961, *On Becoming a Person* (Houghton Mifflin, Boston).
- Rokeach, M.: 1973, *The Nature of Human Values* (Free Press, New York).
- Ryan, R. M.: 1995, 'Psychological needs and the facilitation of integrative process', *Journal of Personality* 63, pp. 397–427.
- Ryan, R. M.: 1998, Unpublished data, University of Rochester.
- Ryan, R. M., V. I. Chirkov, T. D. Little, K. M. Sheldon, E. Timoshina and E. L. Deci: in press, 'The American dream in Russia: Extrinsic aspirations and well-being in two cultures', *Personality and Social Psychology Bulletin*.
- Ryan, R. M. and C. Frederick: 1997, 'On energy, personality and health: Subjective vitality as a dynamic reflection of well-being', *Journal of Personality* 65, pp. 529–565.
- Ryan, R. M., K. M. Sheldon, T. Kasser and E. L. Deci: 1996, 'All goals are not created equal: An organismic perspective on the nature of goals and their regulation', in P. M. Gollwitzer and J. A. Bargh (eds.), *The Psychology of Action: Linking Cognition and Motivation to Behavior* (Guilford, New York), pp. 7–26.
- Schwartz, S. H.: 1992, 'Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries', in M. Zanna (ed.), *Advances in Social Psychology* (Academic Press, New York), pp. 1–65.
- Schmuck, P.: 1999, 'Lebenszielinhalte und Wohlbefinden', Manuscript submitted for publication.

- Sheldon, K. M. and T. Kasser: 1995, 'Coherence and congruence: Two aspects of personality integration', *Journal of Personality and Social Psychology* 68, pp. 531–543.
- Sheldon, K. M. and T. Kasser: 1998, 'Pursuing personal goals: Skills enable progress, but not all progress is beneficial', *Personality and Social Psychology Bulletin* 24, pp. 1319–1331.
- Spielberger, C. D., P. R. Vagg, L. R. Barker, G. W. Donham and L. G. Westberry: (1980), 'The factor structure of the State-Trait Anxiety Inventory', in I. G. Sarason & C. D. Spielberger (eds.), *Stress and Anxiety* (Vol. 7) (Hemisphere Publishing Corp., Washington, DC), pp. 95–109.

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