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On the relations among work value orientations, psychological need satisfaction and job outcomes: A self-determination theory approach

Maarten Vansteenkiste[1]*, Bart Neyrinck[2], Christopher P. Niemiec[3], Bart Soenens[1], Hans De Witte[2] and Anja Van den Broeck[2]

[1]Ghent University, Belgium
[2]University of Leuven, Belgium
[3]University of Rochester, USA

Using self-determination theory, two studies found that holding an extrinsic, relative to an intrinsic, work value orientation was associated with less positive outcomes (i.e. less satisfaction with, dedication to and vitality while on the job) and more negative outcomes (i.e. higher emotional exhaustion, short-lived satisfaction after successful goal-attainment, and turn-over intention). These relations were not limited to job outcomes, but also emerged using indicators of employees' general mental health. Moreover, income level did not moderate these relations. Study 2 found that holding an extrinsic, relative to an intrinsic, work value orientation was detrimental to employees' job outcomes because these orientations thwarted the satisfaction of the basic psychological needs for autonomy, competence and relatedness at work.

Theory and research from industrial and organizational psychology suggest that employees can hold work value orientations that have sharply different foci (e.g. Ravlin & Meglino, 1987; Roe & Ester, 1999; Ros, Schwartz, & Surkiss, 1999; Super, 1968). Some employees view their jobs as opportunities to exercise their competencies and skills, pursue personal interests and make meaningful contributions to society, while others focus primarily on financial success, having control and influence over others and occupying a prestigious position at work. Despite the plethora of labels, work and organizational researchers have empirically distinguished intrinsic work value orientations, which are oriented towards self-actualization and self-expression, from extrinsic work value orientations, which are focused on security and material acquisition (Akhtar, 2000; Alderfer, 1972; Amabile, Hill, Hennessey, & Tighe, 1994; Ben-Yoav & Hartman, 1988; Centers & Bugental, 1965; Cotton, Bynum, & Madhere, 1997; Eichar,

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*Correspondence should be addressed to Maarten Vansteenkiste, Department of Psychology, H. Dunantlaan 2, 9000 Gent, Belgium (e-mail: Maarten.Vansteenkiste@ugent.be).

Norland, Brady, & Fortinsky, 1991; Hageström & Gamberale, 1995; Malka & Chatman, 2003; Mottaz, 1986; Schwartz, 1999), although it should be noted that a number of other work value frameworks have been proposed (see Berings, De Fruyt, & Bouwen, 2004; Dose, 1997, for an overview).

In examining employees' work value orientations, some researchers have paid attention to age and societal trends (e.g. Sverko, 1999; van der Velde, Feij, & van Emmerik, 1998), while others have examined their relations to job outcomes. With respect to the latter issue, a variety of previous studies (e.g. Butler & Vodanovich, 1992; Cheung & Scherling, 1999; Drummond & Stoddard, 1991) has assessed the relations between work value orientations and positive job outcomes, such as job satisfaction and commitment. However, relatively little research has examined the relations between extrinsic, relative to intrinsic, work value orientations and negative job outcomes, such as emotional exhaustion (Maslach & Jackson, 1981; Schaufeli, Maslach, & Marek, 1993), short-lived satisfaction with successful work value attainments (Assor, Roth, & Deci, 2004) and intention to leave the company (Spector, 1997). It is also possible that employees' extrinsic, relative to intrinsic, work value orientations promote certain negative experiences at work that carry-over to their family life (Carlson, Kacmar, & Williams, 2000); that is, the pursuit of certain work values may interfere with the development of a happy and satisfying life outside of work (Spector, 1997). Therefore, an important first aim of this research was to examine the relations between employees' extrinsic, relative to intrinsic, work value orientations and both positive and negative job outcomes.

A second aim of this research was to examine the mechanisms that underlie the relations between employees' extrinsic, relative to intrinsic, work value orientations and positive and negative job outcomes. To our knowledge, no previous research has documented such evidence. Using self-determination theory (SDT; Deci & Ryan, 1985, 2000; Ryan & Deci, 2000), we propose that the satisfaction of the basic psychological needs for autonomy, competence and relatedness (Deci & Ryan, 1991; Ryan, 1995) should largely explain the relations of extrinsic, relative to intrinsic, work value orientations to positive and negative job outcomes.

A final issue addressed in this research concerns whether holding an extrinsic, relative to an intrinsic, work value orientation has a differential effect on well-being as a function of income level. Recently, a number of researchers (e.g. Malka & Chatman, 2003; Nickerson, Schwartz, Diener, & Kahneman, 2003) have suggested that the negative effects of holding an extrinsic (work) value orientation might be offset, or even reversed, for those with a high level of income. However, this prediction stands in contrast to Kasser and Ryan's (1996) finding that extrinsic, relative to intrinsic, value pursuit negatively predicted well-being and self-actualization, regardless of income level. These three important issues were examined in two studies.

Extrinsic and intrinsic work value orientations

Malka and Chatman (2003, p. 739) defined work value orientations as 'work-related reinforcement preferences, or tendencies to value specific types of incentives in the work environment' (see also Caldwell, O'Reilly, & Morris, 1983; Glynn, 1998). Thus, work value orientations are individual preferences rather than 'ought standards' that should be preferred (Dose, 1997; Pryor, 1982, 1987). Intrinsic and extrinsic work value orientations probably give rise to the formulation and pursuit of intrinsic and extrinsic work goals, respectively. Work goals are more specific than work value orientations because they refer to a particular object or end state that is pursued (Oishi, Schimmack,

Diener, & Suh, 1998; Schwartz, 1994), whereas work value orientations are more general and abstract, because they reflect employees' general preferences towards their jobs. In short, consistent with many other value researchers (e.g. De Witte, 2004; Grouzet *et al.*, 2005; Rohan, 2000; Schwartz, 1994), we consider work goals to be expressions or manifestations of higher-order work values.

Further, consistent with Kasser and Ryan's (1993, 1996) conceptualization of intrinsic and extrinsic life values, we consider an *intrinsic work value orientation* to reflect employees' natural desire to actualize, develop and grow at the work place (i.e. self-development), to build meaningful and satisfying relationships with colleagues (i.e. affiliation) and to help people in need (i.e. community contribution). SDT suggests that intrinsic values are associated with higher well-being because their pursuit facilitates the satisfaction of the basic psychological needs for autonomy, competence and relatedness (Deci & Ryan, 2000; Kasser, 2002).

An *extrinsic work value orientation* concerns 'the traditional pursuit of success by advancing up the organizational hierarchy to achieve prestige, status, and high income' (Watts, 1992, p. 51). Within SDT, the pursuits of financial success, power and status reflect an extrinsic orientation because the importance of these values mostly lies within the anticipated personal admiration and self-worth that can be obtained by realizing them (Kasser & Ryan, 1993; Ryan & Deci, 2000; see Richins & Dawson, 1992, for a similar view in consumer psychology). From the perspective of SDT, extrinsically oriented people primarily focus on obtaining external indicators of worth, such as social approval and external rewards and, as a result, they often neglect their personal wants and interests. However, adopting an 'outward' (Williams, Cox, Hedberg, & Deci, 2000) or 'having' orientation (Fromm, 1976; Van Boven & Gilovich, 2003) is likely to detract from psychological health because such an orientation thwarts the satisfaction of the basic psychological needs (Niemiec, Ryan & Deci, 2006).

Studies that examined the relations between the contents of employees' work value orientations and job outcomes have yielded mixed findings. Some have shown a positive relation between an intrinsic work value orientation and job satisfaction (e.g. Amabile *et al.*, 1994), while others have failed to replicate this result (e.g. Drummond & Stoddard, 1991; Knoop, 1994b)[1]. However, the pattern of findings for extrinsic, relative to intrinsic, *life* values is more consistent. Studies have repeatedly found that having a strong focus on extrinsic, relative to intrinsic, life values is detrimental to well-being (e.g. lower self-esteem, vitality, self-actualization and social productivity) and is associated with greater ill-being (e.g. higher narcissism, depressive complaints) as well as poorer physical health (Kasser & Ryan, 1993, 1996; McHoskey, 1999; Vansteenkiste, Duriez, Simons, & Soenens, 2006). Notably, it is possible that these studies on intrinsic vs. extrinsic life values yielded a more consistent pattern of results because they examined the *relative* importance of both types of values. In contrast, organizational psychologists have tended to focus on the effects of the *absolute* importance of employees' intrinsic and extrinsic work value orientations (e.g. Butler & Vodanovich, 1992; Eichar *et al.*, 1991). Based on previous research using SDT, we expected that

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[1] *It should be noted that various studies did not focus on the well-being effects of employees' intrinsic vs. extrinsic work values (i.e. on the type of values employees attach importance to on their jobs), but on related issues, such as the effects of: (a) the experience or fulfilment (but not the importance) of intrinsic and extrinsic work values (e.g. Knoop, 1994a); (b) the congruency between employees' own value and the values of the organization (e.g. Meglino, Ravlin, & Adkins, 1989); (c) the degree to which the job contains intrinsic and extrinsic task characteristics (e.g. Gaziel, 1986; Sergiovanni, 1967); (d) the presence of intrinsic and extrinsic rewards offered by a job (e.g. Mottaz, 1984, 1986; Tuch & Martin, 1991).*

holding an extrinsic, relative to an intrinsic, work value orientation would negatively relate to positive job outcomes and would positively relate to negative job outcomes (*Hypothesis 1*).

Extrinsic vs. intrinsic work value orientations and basic need satisfaction

To our knowledge, no previous study in industrial and organizational psychology has examined the mechanisms that underlie the relations between employees' extrinsic, relative to intrinsic, work value orientations and job outcomes. We aim to fill this theoretical and empirical gap by relying on the SDT conceptualization of basic need satisfaction that forms the theoretical basis for the distinction between intrinsic and extrinsic work values. SDT maintains that people have natural or inherent needs to experience their behaviour as freely chosen and volitional (i.e. to feel *autonomous*; deCharms, 1968; Deci, 1975), to care for others and to feel cared for by them (i.e. to feel *related*; Baumeister & Leary, 1995; Harlow, 1958), and to feel effective and skillful in the activities they undertake (i.e. to feel *competent*; White, 1959). SDT considers these three needs to be the 'nutriments or conditions that are essential to an entity's growth' (Ryan, 1995, p. 410).[2] Such a conceptualization of needs implies that to the extent that the needs are satisfied, people benefit psychologically, but to the extent that they are not satisfied, negative psychological consequences will follow.[3] Buttressing the importance of basic need satisfaction for well-being and adjustment, several studies in the organizational domain (e.g. Baard, Deci, & Ryan, 2004; Deci *et al.*, 2001; Ilardi, Leone, Kasser, & Ryan, 1993; Kasser, Davey, & Ryan, 1992) have found that basic need satisfaction at work predicted positive outcomes, such as job commitment, job attitude, self-esteem and general health.

Within SDT, the predicted relation between work values and job outcomes is a direct function of the degree to which the work values allow satisfaction of the basic needs. To the extent that they do, positive work outcomes are expected, but to the extent that they do not, positive outcomes are expected to be diminished and negative outcomes are expected to emerge. As such, the most optimal outcomes are expected when people's intrinsic values are relatively stronger than their extrinsic values because intrinsic values are theorized to allow for greater satisfaction of the basic psychological needs (Kasser, 2002; Kasser & Ryan, 1996). Unfortunately, no study has directly examined whether the relation of extrinsic, relative to intrinsic, work value pursuit to job outcomes can be accounted for by need satisfaction. However, a number of studies that assessed extrinsic, relative to intrinsic, life values have provided indirect evidence for this position.

For example, concerning the need for relatedness, it was found that people who endorse extrinsic life values are less likely to connect with others in a close, authentic

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and interpersonally trusting way (Kasser & Ryan, 2001; Richins & Dawson, 1992), presumably because extrinsically oriented individuals tend to 'objectify' others and to use them as instruments to attain their materialistic values (Khanna, 1999). In contrast, because intrinsically oriented employees feel concerned about other people, they probably relate to others in a truthful way, thus allowing for a deep experience of connectedness (Kurdek & Schnopp-Wyatt, 1997).

Concerning the need for autonomy, research has also shown that extrinsically oriented people are motivated by rewards, praise and other external incentives (Sheldon & Kasser, 1995). Since extrinsically oriented employees tend to hang their self-worth on extrinsic outcomes (Kasser, 2002), they are likely to feel pressured by ego-involved demands and stressful interpersonal comparisons (Sirgy, 1998), both of which thwart their need for autonomy. In contrast, because intrinsically oriented employees are concerned with developing their talents and potentials, they are more likely to take the initiative and actively participate in job decisions, thus facilitating their experience of autonomy in carrying out their job tasks.

Finally, regarding the need for competence, Kasser (2002) suggested that because extrinsically oriented individuals tend to over-idealize wealth and possessions, they are more likely to continually experience a sense of incompetence in attaining their values. In contrast, intrinsically oriented employees are more likely to seek out challenging tasks that allow them to develop new skills (Amabile *et al.*, 1994), thereby satisfying their need for competence. Thus, based on SDT and previous empirical work, we predicted that holding an extrinsic, relative to an intrinsic, work value orientation would be associated with less positive and more negative job outcomes because they thwart the satisfaction of the basic needs (*Hypothesis 2*).

Extrinsic vs. intrinsic work value orientations and income

LaBarbera and Gürhan (1997) and Nickerson *et al.* (2003) addressed the issue of whether earning a higher income serves to offset, or even reverse, the predicted negative effect of holding an extrinsic, relative to an intrinsic, work value orientation on positive outcomes. On the basis of aspiration theory (Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1967; McGill, 1967), which asserts that subjective well-being is a reflection of the discrepancy between people's aspirations and their attainments, these authors hypothesized that highly extrinsically oriented individuals with a high level of income would suffer less from adopting an extrinsic work value orientation because they have better attained their extrinsic values (i.e. they are earning more money), relative to people with a low level of income. This position is also held by Locke and colleagues (Locke & Latham, 2000) in their goal-setting theory in which they argue that obtained values promote well-being.

The few studies that have examined whether income moderates the relation of extrinsic (work) value orientations to well-being have yielded mixed findings. For instance, LaBarbera and Gürhan (1997) provided partial support for their hypothesis derived from aspiration theory: two of their materialism subscales (i.e. nongenerosity and possessiveness; Belk, 1985) interacted with income in the prediction of general affect, so that materialism was unrelated to general affect for those with a high level of income. Using a longitudinal study, Nickerson *et al.* (2003) found that the negative impact of aspiring to achieve financial success on life satisfaction and job satisfaction was diminished for people earning a high income. Such moderation effects were not found for satisfaction in other life domains (e.g. friendships and family life). Malka and

Chatman (2003) found that extrinsically oriented individuals were more satisfied with their jobs and life if they earned a high income but not if they earned a low income, although these moderation effects were not found for general positive and negative affect (Diener, Emmons, Larsen, & Griffin, 1985). Notably, these authors measured the absolute importance of aspirations, instead of the relative importance, as recommended by Kasser and Ryan (1993).

In contrast to the aforementioned studies, others have found that the attainment of extrinsic values was positively correlated with well-being, but that extrinsic value attainment no longer predicted well-being after controlling for the attainment of intrinsic values (e.g. Kasser & Ryan, 2001; Ryan *et al.*, 1999). Furthermore, Kasser and Ryan (1996) found that the negative effects of an extrinsic, relative to an intrinsic, life value orientation on a broad range of well-being outcomes (i.e. self-actualization, vitality, depression, anxiety and physical symptoms) were not offset for people with a high level of income. Similarly, Neyrinck (2003) found that, in a large sample comprising four individualistic and four collectivistic countries (Triandis, 1996), an extrinsic, relative to an intrinsic, work value orientation did not interact with income in the prediction of job satisfaction, life satisfaction or life happiness. Such findings fit with SDT's position that the pursuit of extrinsic values, even when they are attained, is less likely to yield job satisfaction and happiness because extrinsic value pursuit tends to be inconsistent with basic need satisfaction.

This overview suggests that more research is needed on the possible moderating role of income level in the association between extrinsic, relative to intrinsic, work value orientations and well-being. Aspiration theory would predict an interaction between income and extrinsic work value pursuit, such that the pursuit of extrinsic, relative to intrinsic, work values is detrimental for individuals with a low income and is beneficial for individuals with a high income. In contrast, using SDT, we hypothesized that the pursuit of extrinsic values would negatively predict positive job outcomes regardless of income level (*Hypothesis 3a*). Finally, although we expected that the subjective valuation of wealth and material success would detract from positive job outcomes, we also expected, based on past research (e.g. Diener, Suh, Lucas, & Smith, 1999; Easterlin, 2001; Stutzer, 2004), that earning a higher income would positively relate to well-being (*Hypothesis 3b*).

The present research

The present research had three primary aims. First, in line with SDT, we examined whether employees' who held an extrinsic, relative to an intrinsic, work value orientation would report less positive and more negative job outcomes. This hypothesis was examined in Study 1 and in Study 2. We selected our dependent variables on the basis of the following considerations. First, in line with the current positive psychology movement that characterizes both the field of psychology in general (Deci & Vansteenkiste, 2004; Seligman & Csikszentminhalyi, 2000; Sheldon & King, 2001) and occupational health psychology in particular (Schaufeli, 2004; Schaufeli & Bakker, 2001), a variety of indicators of positive job outcomes were examined, including job satisfaction (i.e. the evaluation of employees' jobs as (un)satisfying; Lease, 1998), dedication (i.e. being proud of and devoted to the job; Schaufeli & Bakker, 2003; Schaufeli, Salavona, Gonzalez-Roma, & Bakker, 2002) and vitality (i.e. feeling energized by the job; Schaufeli *et al.*, 2002). Second, because the impact of extrinsic, relative to intrinsic, work values on outcomes that have a more negative tone has been

under-explored, we also assessed two negative outcomes, namely emotional exhaustion (i.e. experiencing a sense of emptiness at work, which represents the core component of burn-out; Maslach & Jackson, 1981) and short-lived satisfaction after successful goal-attainment at work (i.e. the experience that attaining a particular work goal only provides a derivative and short-lived sense of satisfaction; Assor *et al.*, 2004). Third, to examine whether an extrinsic, relative to an intrinsic, work value orientation would not only negatively relate to job outcomes, but also to general well-being outcomes, we included indicators of life happiness, life satisfaction and work–family conflict (i.e. experiencing work problems as interfering with having a satisfying family life (Carlson *et al.*, 2000).

The second aim was to examine whether the predicted negative effect of an extrinsic, relative to an intrinsic, work value orientation would be offset or even reversed for employees with a high income level, as hypothesized by aspiration theory, or would also apply to individuals with high income, as predicted by SDT. In addition, we examined whether the earning of a higher income would positively predict job well-being. These hypotheses were examined in Study 1. The final aim of this study was to examine whether basic need satisfaction would account for the hypothesized negative effects associated with extrinsic, relative to intrinsic, work value orientations. This hypothesis was investigated in Study 2.

STUDY I

Four hypotheses guided Study 1. First, we predicted that employees' whose work value orientation was primarily extrinsic would experience lower job satisfaction, and would also display signs of lower satisfaction and happiness with their life in general because negative experiences at work are likely to carry-over and influence the way employees experience their life (i.e. spill-over hypothesis; Spector, 1997).

Second, we examined whether these relations would hold after controlling for the demographic variables age, gender and educational level. Controlling for age is particularly important because there exists some evidence that older individuals are more likely to be more intrinsically and less extrinsically oriented (e.g. Sheldon & Kasser, 2001) and that age is a positive predictor of job and life satisfaction (Birdi, Warr, & Oswald, 1995; Warr, 1992). Hence, the relations between extrinsic, relative to intrinsic, work value orientations and job and life satisfaction might be inflated because they may be partially or completely accounted for by age.

Third, although we expected that the subjective valuation of wealth and material success, relative to intrinsic work values, would detract from (job) well-being, we also expected that the objective earning of a higher income would positively predict job satisfaction and life satisfaction (Diener *et al.*, 1999). Finally, consistent with the suggestion by LaBarbara and Gürhan (1997), Nickerson *et al.* (2003) and Malka and Chatman (2003), we explored whether the predicted negative impact of an extrinsic, relative to an intrinsic, work value orientation on positive job outcomes would be diminished for employees with a high level of income. Since individuals with a high level of income have achieved their extrinsic aspirations, they might suffer less from aspiring toward financial success. However, these moderation hypotheses conflict with SDT's suggestion that pursuing extrinsic values is harmful for all employees because such an orientation hinders their opportunities to satisfy basic psychological needs, which is

universally critical for optimal functioning (Deci & Ryan, 2000). These hypotheses were examined in a representative sample of Belgian employees.

Method

Participants and procedure

Participants were 885 Belgian employees who participated in the third wave of the European Values Study (EVS; Halman, 2001). As we wanted to include job satisfaction in our analysis, the sample was limited to employed respondents only. A random sample of addresses within the three parts of Belgium (i.e. Brussels, $N = 201$, Flanders, $N = 443$ and Wallonia, $N = 241$) was selected and respondents were individually interviewed at home. The sample was representative of the Belgian population, even though a slight underrepresentation of low skilled individuals was noted. The data set was, however, rather heterogeneous as far as educational level and occupations were concerned. Specifically, regarding education, 11% were low educated (i.e. elementary education), 43% were moderately educated (i.e. secondary education) and 46% were highly educated (i.e. higher education, tertiary certificate). Regarding occupational level, 7% were employer or self-employed (e.g. manager), about 14% were professional workers (e.g. lawyer, accountant), 25% were white-collar workers junior middle level, 28% were white-collar junior level and 26% were blue-collar workers (for more details, see: Dobbelare, Elchardus, Kerkhofs, Voyé, & Bawin-Legros, 2000; Halman, 2001). Further, 53% of the participants were male. The mean age of the participants was 40 ($SD = 11.16$), and 5% were less than 25 years old, 52% were between 25 and 40 years old, 35% were between 41 and 55 years old and 8% were more than 55 years old. Monthly household income was measured on a 10-point scale, counting all wages, salaries, pensions and other incomes that were received, after taxes and other deductions. Of the participants, 5% had a low income (scale anchors 1–2, less than €875), 27% had a moderate low income (scale anchors 3–5, ranging between €875 and €1624), 45% had a moderate high income (scale anchors 6–8, ranging between €1624 and €2624) and 23% had a high income (scale anchors 9–10, above €2624). Since we used data from the EVS, the choice of measures was limited to those assessed by the EVS.

Measures

Work value orientations

Participants were presented with a list of eight items that represented intrinsic and extrinsic work values. Most of the four intrinsic work value items (i.e. 'an opportunity to use initiative', 'a job that is interesting', 'a job that meets one's abilities', 'a responsible job') and most of the four extrinsic work value items (i.e. 'good pay', 'good job security', 'not too much pressure' and 'generous holidays') are identical to items used in previous research (e.g. Knoop, 1994b; Ros *et al.*, 1999). Participants reported the extent to which they valued each of them (1 = *important*, 0 = *not important*). A factor analysis with promax rotation revealed two clear factors; the four intrinsic work value items all had a loading of above .67 on the first factor (eigenvalue of 2.30), while the four extrinsic work value items had loadings of above .57 on the second factor (eigenvalue of 1.48). Together, these two factors accounted for 47% of the variance. Thus, as was found in previous studies on life values (e.g. Kasser & Ryan, 1993, 1996) and work values (e.g. Knoop, 1994b; Ros *et al.*, 1999), the classification of work value orientations into

intrinsic and extrinsic is appropriate. The four dichotomously scored items of each subscale were summed and yielded a reliability of .64 and .61 for the intrinsic and extrinsic work value orientation subscales, respectively. The intrinsic and extrinsic value subscales were significantly positively correlated (.21, $p < .001$), suggesting that employees who attach high importance to intrinsic values also tend to attach importance to extrinsic values. Finally, we calculated an overall work value scale by summing the eight items.

Well-being

Job satisfaction, life satisfaction and life happiness were assessed as indicators of well-being. To assess job satisfaction, participants were asked to indicate their level of satisfaction with their current jobs by encircling a number between 1 (*dissatisfied*) and 10 (*satisfied*). In a meta-analysis of 17 studies, Wanous, Reichers, and Hudy (1997) report a mean correlation of .63 between this one-item measurement and multi-item assessments of job satisfaction (see also Scarpello & Campbell, 1983). Participants were also asked to indicate their level of general life satisfaction by encircling a number, ranging from 1 (*dissatisfied*) to 10 (*satisfied*). Finally, participants were asked to indicate their level of life happiness using a four-point Likert-type scale, ranging from 1 (*not at all*) to 4 (*very much*). Pavot and Diener (1993) provide evidence for the validity of these one-item assessments.

Results and brief discussion

Independent sample *t* tests indicated that men and women did not differ on the three outcome variables or on the extrinsic and intrinsic work values. The correlations between the background variables and the various outcomes are presented in Table 1.

Table 1. Bivariate correlations between background variables, work value orientations and outcome variables – Study 1 (N = 885)

	1	2	3	4	5	6	7
1. Age							
2. Level of education	− .06						
3. Level of income	.03	.27***					
4. Intrinsic work value orientation	− .01	.22***	.14**				
5. Extrinsic work value orientation	− .04	− .17***	.01	.21***			
6. Job satisfaction	.09**	.07*	.09*	.09*	− .03		
7. Life satisfaction	− .03	.13***	.18***	.10**	− .05	.40***	
8. Life happiness	− .05	.07*	.19***	.05	− .09**	.28***	.53***

*$p < .05$; **$p < .01$; ***$p < .001$.

To test the hypothesis that holding an extrinsic, relative to an intrinsic, work value orientation would negatively predict job satisfaction, life satisfaction and life happiness, a set of regression analyses were conducted in which the extrinsic work value orientation score was entered in the equation after controlling for overall work importance ascribed to intrinsic plus extrinsic work values. Thus, for example, job

satisfaction was regressed onto the overall work value orientation score in a first step, and then the semi-partial for the importance of extrinsic work value orientation was added at the next step. This procedure is analogous to the one used by Kasser and Ryan (1993, 1996), as it controls for people's general tendency to attach high importance to any type of work values without taking into account the content of work values. In other words, this procedure explores the importance of extrinsic, relative to intrinsic, work values (for a similar procedure, see Schwartz & Huismans, 1995).[4]

The results of the regression analyses are presented in Table 2 in three separate steps. In Step 1, we entered the overall work value composite and the background variables age and education level; we also examined the effect of income. Age positively predicted job satisfaction, whereas income positively predicted life satisfaction and life happiness (but not job satisfaction). In Step 2, we entered the extrinsic work value score. While controlling for the overall importance ascribed to work values, holding an extrinsic work value orientation negatively predicted job satisfaction, life satisfaction and life happiness. The results for the background variables and income remained unchanged after adding the extrinsic work value score. In Step 3, we examined whether the relation of an extrinsic work value orientation to job outcomes would be moderated by level of income, as suggested by Nickerson *et al.* (2003). We constructed an interaction term as the product of the centred means of extrinsic work value orientation and income. All of the main effects obtained in Step 2 remained significant in Step 3. Most important, none of the interactions between extrinsic work value orientation and income were significant, suggesting that holding an extrinsic, relative to an intrinsic, work value orientation negatively predicted job and life satisfaction, regardless of employees' level of income. The predictors explained between .03 and .05% of the variance in the well-being outcomes (all p's < .01).

To summarize, consistent with SDT, factor analyses indicated that people's work values could be classified into an intrinsic and extrinsic work value category, and both work values were positively correlated. Such a positive correlation may be a reflection of the overall importance people ascribe to employment, regardless of the particular values they aim to strive for on the job. In other words, individuals who value employment may ascribe high importance to all types of work values, whereas those who do not value employment may fail to recognize the importance of any work value. An alternative interpretation suggests that employees truly reflect on the content of the work values and that they ascribe high importance to both intrinsic and extrinsic work values.

Further, regression analyses revealed that, after controlling for age and educational level, employees who attached relatively more importance to extrinsic work values were less satisfied with their jobs and tended to be less happy with their lives. In contrast to extrinsic vs. intrinsic work value pursuit, income had a positive relation to life satisfaction and life happiness (but not to job satisfaction). Income did not moderate the effect of extrinsic, relative to intrinsic, work value pursuit: Holding an extrinsic, relative to an intrinsic, work value orientation was detrimental for the job satisfaction and life well-being of employees with a low and a high level of income.

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[4] *Taking out the total work importance (regardless of its content) in a first step and entering intrinsic work value orientations in a second step implies looking at the relative importance of intrinsic vs. extrinsic work value orientations. Entering extrinsic work value orientations in a second step yields a consideration of the importance of extrinsic vs. intrinsic work value orientations. Since such analyses provide the same results but opposite in sign, only the results for the extrinsic work value orientation analyses are reported.*

Table 2. Hierarchical multiple regression analyses predicting job satisfaction, life satisfaction and life happiness

	Job satisfaction			Life satisfaction			Life happiness		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age	.10**	.10**	.10**	− .04	− .04	− .04	− .05	− .05	− .05
Education	.07	.05	.05	.08*	.06	.06	.02	− .01	− .01
Income	.06	.06	.07	.16***	.16***	.16***	.20***	.20***	.20***
Overall work value orientation	.03	.12*	.12*	− .01	.10	.10	− .05	.06	.06
Extrinsic work value orientation		− .12*	− .13*		− .14*	− .14*		− .14*	− .14*
Income × extrinsic work value orientation			.01			.02			.00

Note. N = 885.
*p < .05; **p < .01; ***p < .001.

STUDY 2

The purpose of Study 2 was to replicate and extend the findings from Study 1 in several ways. The primary goal of this study was to explore whether satisfaction of the basic needs for autonomy, competence and relatedness would mediate the relations between holding an extrinsic, relative to an intrinsic, work value orientation and employees' positive and negative job outcomes. As mentioned previously, although various studies based on SDT provide indirect evidence for this hypothesis (see Kasser, 2002), no previous study has, to our knowledge, directly examined this hypothesis.

Second, we sought to overcome a number of methodological limitations from Study 1. First, we used well-validated measures to assess positive and negative job outcomes. Second, a broader range of outcomes was included, reflecting both positive (i.e. vitality, dedication and satisfaction) and negative (i.e. emotional exhaustion, short-lived satisfaction and turn-over intention) facets of people's work. In addition, we assessed the extent to which employees experienced difficulties in coordinating their work and family life.

Further, instead of using a nomothetic approach to measure employees' work value orientations, we used an idiographic approach (Emmons, 1991). Respondents were allowed to generate their personal work goals for the next 6 months and then were asked to indicate the extent to which their self-generated goals served their attainment of intrinsic and extrinsic work values. Finally, because the intrinsic and extrinsic work value scales in Study 1 proved to have rather low, albeit satisfying, reliabilities (.64 and .61, respectively), we assessed a broader range of intrinsic (i.e. self-development, community contribution and affiliation) and extrinsic (i.e. financial success, power and social recognition) work values and used Likert-type scales rather than a dichotomous scoring system.

As in Study 1, we expected that adopting an extrinsic, relative to an intrinsic, work value orientation would be negatively related to positive job outcomes and positively related to emotional exhaustion and short-lived satisfaction. We expected that the negative impact of a strong focus on extrinsic work values would not be limited to psychological functioning at work, but would be evidenced among turn-over intention and conflict between work and family life. Extrinsically oriented individuals are more likely to experience their jobs as mentally draining, which would probably increase the likelihood of intending to leave the job and would prevent them from fully participating in the development of a happy family life. Finally, we hypothesized that these relations between extrinsic, relative to intrinsic, work value orientations and these outcomes would be mediated by basic need satisfaction. As intrinsically, relative to extrinsically, oriented employees are more likely to have their basic needs satisfied, they might feel more vital, energized and satisfied with their job, they might become more dedicated to their jobs, and they would feel less empty and mentally exhausted at the end of a work day.

Method

Participants and procedures

One hundred and nineteen employees of the administrative staff of a Flemish community participated in the study. A total of 250 community employees were asked to complete questionnaires during their lunch break, and 119 of them were returned (response rate = 47.6%). There were 51 males (45.1%) and 62 women (54.9%) who participated in the study (six employees failed to disclose their gender). The average age of those participants who reported their age was 41 years; 6% were younger than 25 years, 28% were between 25 and 40 years old, 54% were between 41 and 55 years old and 12% were more than 55 years old (14% failed to disclose their age). Regarding education, 21% were low educated (i.e. primary school education), 32% were moderately educated (i.e. secondary school education) and 47% were highly educated (i.e. high school or university level) (nine employees did not report their level of education). The time worked at the community by the participants was 10% less than 2 years, 19% between 2 and 5 years, 17% between 5 and 10 years and 52% for more than 10 years.

Measures

Work value orientations

Participants were asked to self-generate four work strivings or goals they wanted to achieve in the coming 6 months (see Emmons, 1986, 1991). Several examples (e.g. 'trying to cooperate more with my colleagues', 'making a good impression on my boss', 'trying to avoid making faults') were provided to help employees generate work goals. Then, participants were told that each work goal might help them to realize their work values, and they were asked to indicate, using a seven-point Likert-type scale, ranging from 1 (*not important at all*) to 7 (*very important*), how important each self-generated goal was for attaining the work values (see Sheldon & Kasser, 1995 for a similar methodology). As in previous research that has assessed life values using the Aspiration Index (Kasser & Ryan, 1996), three intrinsic work values (i.e. self-development, community contribution and affiliation) and three extrinsic work values (i.e. financial success, recognition and power) were assessed. For each of these intrinsic and extrinsic

work values, a positively worded item (e.g. 'this goal is important to me because it helps me to develop satisfying relationships with my colleagues') and a negatively worded item (e.g. 'this goal is important to me because I don't lose my power and control over others by pursuing it') were given. Of the participants, 110 generated at least two work goals; however, only 93 filled out three of them and only 84 filled out all four requested work goals. In order to avoid a substantial loss of data, we decided to restrict our analyses to the first two work goals. Three intrinsic and three extrinsic subscales were created by averaging the four items for each subscale; internal consistencies for these six subscales varied between .73 and .86. Then, a second-order principal component analysis with promax rotation was performed and two factors with eigenvalues higher than 1 (2.43 and 1.25) were retained, explaining 61% of the variance. As in Study 1, these two higher-order factors could be clearly interpreted as representing intrinsic and extrinsic work value orientations. Finally, intrinsic and extrinsic work value composite scores were created by averaging the three intrinsic subscales and the three extrinsic subscales. The internal consistency was .81 and .89 for the intrinsic and extrinsic work value composite scales, respectively. As in Study 1, both work value orientations were moderately correlated, $r(119) = .31, p < .01$. A total work value orientation score was created by averaging the intrinsic and extrinsic work value orientation scores.

Basic need satisfaction at work

Twenty-one items assessed participants' satisfaction of the needs for competence, autonomy and relatedness at the workplace (Deci *et al.*, 2001). Specifically, participants indicated on a five-point Likert-type scale ranging from 1 (*completely disagree*) to 5 (*completely agree*) to what extent: (a) they felt effective and competent in carrying out their job tasks (satisfaction of competence; six items, e.g. 'I feel competent in my job'; $\alpha = .77$); (b) they experienced a sense of volition and self-initiative with respect to the which and how job tasks needed to be carried out (satisfaction of autonomy; seven items, e.g. 'I can make a lot of inputs to deciding how my job gets done'; $\alpha = .79$); (c) they had intimate and close relationships with colleagues (satisfaction of relatedness; eight items, e.g. 'There are not many people at my work that I am close to'; $\alpha = .77$). This scale has been used successfully in other studies (e.g. Deci *et al.*, 2001; Ilardi *et al.*, 1993). The 21 items were averaged to create a need satisfaction at work composite ($\alpha = .84$).

Positive job outcomes

Schaufeli and Bakker's (2003) measures of job vitality and dedication assessed participants' experience of energization on their jobs (five items, e.g. 'On my job I'm full of energy') and their experience of dedication and pride toward their work (five items, e.g. 'I'm enthusiastic about my job'). The reliability for the job vitality and dedication measures were $\alpha = .81$ and .86, respectively. We assessed job satisfaction using the single-item measure from Study 1 in addition to four items created for this study (e.g. 'I'm generally satisfied with my current job'). The reliability for these items was $\alpha = .79$. Responses were made on a five-point Likert-type scale ranging from 1 (*completely disagree*) to 5 (*completely agree*).

Emotional exhaustion

The emotional exhaustion scale (Schaufeli & van Dierendonck, 2001) assessed participants' experience of feeling emotionally drained by their jobs (six items,

e.g. 'I have the feeling that I'm mentally exhausted by my job'). Responses were made on a five-point Likert-type scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*). The reliability for this measure was $\alpha = .86$.

Short-lived satisfaction after successful goal-attainment

Three items used by Assor *et al.* (2004) assessed participants' experiences that the positive feelings that follow from successful goal-attainment at work were short-lived and superficial (e.g. 'The good feelings I experience after realizing a particular work goal are quickly followed by feelings of emptiness and disappointment'). Responses were made on a five-point Likert-type scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*). The reliability for this measure was $\alpha = .73$.

Work–family conflict

Work–family conflict assessed whether participants felt that their role as an employee interfered with their role as a family member and hindered their ability to participate fully in, and build a happy family life (Greenhaus & Beutell, 1985). Two items were used to assess strain-based work–family conflict (Carlson *et al.*, 2000; e.g. 'When I come home, I'm often so tired and exhausted that I have problems participating in family activities'). Responses were made on a five-point Likert-type scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*). These items were highly correlated (.73, $p < .001$).

Intention to turn-over

Six items used by Shaw (1999) assessed participants intent to leave their job soon (e.g. 'I often think about leaving this job'). Responses were made on a five-point Likert-type scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*). The reliability for this measure was $\alpha = .91$.

Results

Independent sample *t* tests indicated that men and women did not differ from each other on any of the work value orientations or outcome variables, except for turn-over intention: men were more inclined to leave the job than women, $t(111) = 2.13$, $p < .05$. Age was negatively correlated with basic need satisfaction, $r = -.20, p < .05$, but unrelated to any of the outcomes. Level of education was positively correlated with need satisfaction, work–family conflict and emotional exhaustion, $r = .29, .22$ and $.19$, all p's $< .05$, respectively; work experience was unrelated to any of the outcomes. The intercorrelations between the background, mediating and dependent variables appear in Table 3.

To examine the relation of holding an extrinsic, relative to an intrinsic, work value orientation to positive and negative job outcomes, we followed the same hierarchical regression procedure as in Study 1. In a first step, each outcome variable was regressed onto the background variables work experience, age, level of education and gender and the overall importance ascribed to intrinsic plus extrinsic work values. In Step 2, the extrinsic work value orientation was added to the equation to explore whether a focus on extrinsic, relative to intrinsic, work values would predict less positive and more

Table 3. Bivariate correlations between outcome variables – Study 2 (N = 110)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Work experience													
2. Age	.65***												
3. Level of education	−.15	−.20*											
4. Intrinsic work value orientation	−.13	−.11	.07										
5. Extrinsic work value orientation	.03	−.03	−.08	.31***									
6. Need satisfaction	−.20*	−.20*	.29**	.29**	−.14								
7. Dedication	−.11	−.11	.16	.26**	−.04	.77***							
8. Job vitality	−.12	−.08	.16	.30***	.04	.72***	.76***						
9. Job satisfaction	−.06	−.04	.10	.30***	−.10	.77***	.83***	.77***					
10. Short-lived satisfaction	.21*	.16	−.12	−.20*	.16	−.60***	−.58***	−.50***	−.62***				
11. Work–family conflict	.01	.05	.22*	−.07	.20*	−.29***	−.20*	−.15	−.34***	.52***			
12. Emotional exhaustion	.04	−.02	.19*	−.21**	.17	−.46***	−.49***	−.40***	−.61***	.73***	.70***		
13. Turn-over intention	−.14	−.09	.13	−.07	.20*	−.49***	−.53***	−.42***	−.64***	.55***	.45***	.69***	

*p < .05; **p < .01; ***p < .001.

negative job outcomes. These results appear in the first column of Table 4. After partialling out overall work value orientation, holding an extrinsic work value orientation negatively predicted dedication, job vitality and job satisfaction, and positively predicted short-lived satisfaction, work–family conflict, emotional exhaustion and turn-over intention.[5]

Table 4. Betas for paths in the mediational analyses

	Step 1 (controlling for overall work value orientation)	Step 2 (controlling for overall work value orientation)	Step 3 (controlling for need satisfaction)	Step 4	Sobel test	R^2
Dedication	− .47**	− .63***	.02	.77***	− 3.59***	.60***
Job vitality	− .41**	− .63***	.05	.72***	− 3.50***	.53***
Job satisfaction	− .62***	− .63***	− .16	.73***	− 3.56***	.58***
Short-lived satisfaction	.46**	− .63***	− .13	.56***	3.29**	.36***
Work–family conflict	.38*	− .63***	.20	− .29**	2.31*	.14**
Emotional exhaustion	.57***	− .63***	.30	− .43***	2.93**	.26***
Turn-over intention	.44**	− .63***	.13	− .49***	3.11**	.27***

Note. Step 1 refers to the path from the independent variable extrinsic work value orientation to the dependent variable controlling for overall work value orientation. Step 2 refers to the path from the independent variable extrinsic work value orientation to the mediating variable basic need satisfaction after controlling for overall work value orientation. Step 3 refers to the path from the independent variable extrinsic work value orientation to the dependent variable controlled for the mediating variable need satisfaction. Step 4 refers to the path from the mediating variable need satisfaction to the dependent variable controlled for the independent variable extrinsic work value orientation. R^2 = variance explained in the dependent variable by the independent and mediating variable.
*$p < .05$; **$p < .01$, ***$p < .001$.

Then, we examined whether basic need satisfaction could explain the negative effects associated with adopting an extrinsic, relative to an intrinsic, work value orientation. Each mediational test consisted of meeting four necessary conditions for full mediation, as outlined by Baron and Kenny (1986): (1) the independent variable, extrinsic, relative to an intrinsic, work value orientation, must predict the dependent

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[5] *One of the reviewers suggested that intrinsically, relative to extrinsically, oriented employees might display more positive and less negative job outcomes, because they feel more able to attain their goals. For each of the generated goals, employees had indicated whether they felt able to attain their goals in the coming months or not on a 1 (completely disagree) to 7 (completely agree) scale. The pursuit of intrinsic values positively correlated with this expectancy score (r = .21, p < .05), whereas the pursuit of extrinsic values did not (r = .09, ns). After having entered the background variables, the total value score and the extrinsic value score in a first step in a hierarchical regression analyses, we found that the expectancy scale, which was added in a second step, significantly predicted all three positive job outcomes (α ranging between .20 and .29, all p's < .05), but was unrelated to all negative job outcomes. Most importantly, the effect of extrinsic, relative to intrinsic, value pursuit did not decrease in strength and remained significant in all analyses, suggesting that effect of intrinsic vs. extrinsic value pursuit is not carried away by the extent to which employees feel they are able to attain their goals.*

variable; (2) the independent variable must predict the mediating variable, basic need satisfaction; (3) the mediating variable must predict the dependent variable when controlling for the independent variable; (4) the relation of the independent variable to the dependent variables must disappear when the mediating variable is controlled for. These results appear in Table 4.

The first requirement for mediation was met: after controlling for overall work value orientation, extrinsic work value orientation significantly predicted each of the outcomes. Extrinsic work value orientation was also negatively related to basic need satisfaction, after controlling for overall work value orientation (see column 2, Table 4), suggesting that the second requirement for mediation was also met. Third, the significant effect of extrinsic work value orientation to the outcomes significantly dropped in magnitude and became non-significant after controlling for basic need satisfaction (see column 3, Table 4), whereas the mediator, basic need satisfaction, significantly predicted the outcomes (see column 4, Table 4). The drop in magnitude of the effect of extrinsic work value orientation on the outcomes after controlling for basic need satisfaction was significant (Sobel, 1982; see column 5, Table 4). The amount of variance explained in the outcomes by the independent and mediating variables varied between 14 and 61%, $p < .001$.

To summarize, the results of Study 2 replicated and extended the findings obtained in Study 1. First, adopting an extrinsic, relative to an intrinsic, work value orientation negatively predicted positive job outcomes (i.e. satisfaction, dedication and vitality), and positively predicted emotional exhaustion, short-lived satisfaction, the intention to leave the company and work–family conflict. Second, mediation analyses indicated that basic need satisfaction accounted for these relations. In all eight cases, the significant direct relations between extrinsic work value orientation and the outcomes significantly dropped in magnitude after entering need satisfaction. Thus, it appears that employees who primarily valued their jobs because they allowed them to acquire material success, status and control over others instead of expanding their capacities, personality and social relationships, were less likely to experience basic need satisfaction at work, which, in turn, explained why they experienced their job as less positive and reported more maladaptive outcomes.

GENERAL DISCUSSION

In this research we applied the idea of differentiating between intrinsic and extrinsic *life* values (Kasser & Ryan, 1993, 1996) to the work domain. According to SDT (Deci & Ryan, 2000; Ryan & Deci, 2000), an intrinsic work value orientation is congruent with the desire for growth and self-actualization at the workplace, whereas an extrinsic work value orientation reflects a tendency to focus on external indicators of worth, such as aspiring toward financial success, obtaining social recognition from others and exerting control and power over others at work. SDT maintains that an extrinsic work value orientation is likely to distract employees from their personal wants and desires because extrinsically oriented employees become concerned with other people's opinions (see also Dyckman, 1998). Factor analyses in the present research demonstrated, in line with previous studies in work and organizational psychology (e.g. Cotton *et al.*, 1997), that both types of work value orientations can be clearly distinguished. Notably, these two factors emerged regardless of the way employees work value orientations were assessed, that is, with the nomothetic procedure that provides participants with a list of work

values to be rated (Study 1), or with the ideographic procedure that requires individuals to generate their personal work goals for the next 6 months and then indicate the importance that these goals have for the attainment of intrinsic and extrinsic work values (Study 2).

Implications of employees' work value orientations

One of the primary goals of the present research was to relate these work value orientations to a variety of outcomes. Consistent with past studies in the work and organizational domain (e.g. Amabile *et al.*, 1994) and with SDT (e.g. Kasser & Ryan, 2001; Vansteenkiste, Duriez, *et al.*, 2006), adopting an extrinsic, relative to an intrinsic, work value orientation was found to predict less positive and more negative job outcomes. In both studies, holding an extrinsic, relative to an intrinsic, work value orientation was associated with less positive job outcomes, as measured by job satisfaction, work dedication and job vitality. Notably, both studies also revealed that the negative effect of adopting an extrinsic, relative to an intrinsic, work value orientation was not limited to employees' jobs. Rather, these negative experiences carried over into employees' life; extrinsically oriented employees reported lower life satisfaction, were less happy with their lives and experienced more conflict between their jobs and their family life. Perhaps, while intrinsically oriented employees felt sufficiently energized after their day at work to participate fully in their family lives, extrinsically oriented employees felt mentally depleted after work, which impedes the development of a satisfying family life (see also Nickerson *et al.*, 2003).

Further, Study 2 revealed that being predominantly extrinsically oriented not only entailed less positive experiences, but was also associated with more signs of unhappiness. Extrinsically oriented employees felt more exhausted and empty, and experienced the positive feelings that typically accompany the attainment of a particular work goal as less stable and more short-lived. Notably, all of these findings remained significant after controlling for various background variables. Finally, we examined whether an extrinsic, relative to an intrinsic, work value orientation would relate to an intention to leave the company, an outcome that is of considerable importance for the organization (Spector, 1997). A number of previous studies have examined the motivational antecedents of work turn-over (e.g. Bandura, 1991; Richer, Blanchard, & Vallerand, 2002), and the present study added to this line of research. As expected, when employees focused more strongly on the attainment of extrinsic, relative to intrinsic, work values, they were more likely to intend to leave the company. This result is consistent with recent experimental work in the educational context, which shows that telling participants that a learning activity is useful to attain an extrinsic value undermines their future voluntary persistence at the activity compared with when the learning activity is said to serve an intrinsic value (e.g. Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Overall, this finding suggests that, in addition to yielding considerable well-being costs, being extrinsically oriented also appears to be associated with negative consequences for the organization.

One additional finding warrants further discussion. Although some researchers (e.g. Nickerson *et al.*, 2003) have suggested that an extrinsic value orientation does not negatively affect the well-being of individuals with a high income, Study 1 did not provide evidence for this interaction hypothesis. Rather, regardless of employees' level of income, a stronger subjective valuation of extrinsic, relative to intrinsic, work values was associated with lower job and life satisfaction. This finding is congruent with SDT's

contention that a strong focus on money and materialistic goods detracts from the satisfaction of the basic needs for autonomy, competence and relatedness, which is critical for *all* people's well-being (Ryan, 1995). Although various work and organizational psychologists (e.g. Andrews & Withey, 1976; Locke & Latham, 2000; Nickerson *et al.*, 2003) would predict that attaining materialistic aspirations might yield some satisfaction (but see Kasser & Ryan, 2001; Sheldon & Kasser, 1998, for counter-evidence), SDT maintains that these positive feelings are likely to fade away quickly because the attainment of materialistic goods is less likely to be accompanied by basic need satisfaction. Notably, although a stronger personal focus on extrinsic work values, at the expense of intrinsic work values, negatively predicts positive job outcomes, individuals who objectively earn a higher income were more satisfied and happy with their lives. To us, this seems an intriguing paradox: although people's well-being is likely to be enhanced when they make more money, it is simultaneously undermined when money and financial success become the primary values at work. A similar paradox has been observed by various economists (e.g. Easterlin, 1995; Stutzer, 2004).

Basic need satisfaction as an explanatory mechanism

Intrinsically oriented individuals, relative to those who are predominantly extrinsically oriented, more often engage in activities that satisfy their needs for autonomy, competence, and relatedness (Kasser, Ryan, Couchman, & Sheldon, 2004) which, in turn, is related to various positive job outcomes. Study 2 provides considerable evidence for these mediational hypotheses. Specifically, the direct effect of holding an extrinsic, relative to an intrinsic, work value orientation on all measured outcomes became non-significant when basic need satisfaction was controlled for. We believe this is an important finding. Various SDT researchers (e.g. Deci & Ryan, 2000; Kasser, 2002) have relied on the concept of basic psychological needs as a heuristic framework to interpret the effects of extrinsic vs. intrinsic values on well-being and adjustment but, to our knowledge, no single study to date has directly examined this issue. We suggest that the current explanatory role of basic needs can be interpreted in two different ways, that is, from the viewpoint of intrinsically or extrinsically oriented employees.

First, intrinsically oriented employees may engage more often in activities that satisfy their basic needs, so that the pursuit of intrinsic work values fulfils a growth-promoting role (Deci & Ryan, 2000; Vansteenkiste, Lens, & Deci, 2006). For instance, because intrinsically oriented employees value personal growth and self-development, they are more likely to take initiative and responsibility for their work, thereby experiencing a sense of participation, choicefulness and freedom; they are recognized for such efforts, and experience a sense of personal accomplishment and effectance. Moreover, they find it important to do something for the betterment of society or to help their colleagues at work, and might therefore relate in an authentic way to other people, and thus experience a sense of connectedness to others.

A second interpretation suggests that adopting an extrinsic mindset might also hinder growth. In this regard, Kasser (2002) suggested that extrinsically oriented individuals tend to over-idealize materialistic ambitions. This results in at least two negative consequences in terms of need satisfaction. First, they hang their self-worth on attaining those extrinsic work values and therefore, ego-based demands pressure them to strive to attain these values, thus undermining their feelings of choice and freedom at work. Second, because of this over-idealization of extrinsic work values, extrinsically oriented employees continually experience a discrepancy between their ideal extrinsic

work values (e.g. having a well-paying job, generous holidays, etc.) and their present state. Since the attainment of extrinsic values only entails short-lived satisfaction and quickly leads to the formulation of new extrinsic aspirations, extrinsically oriented employees seldom have the feeling of getting what they want (i.e. extrinsic values). Hence, they might continually experience feelings of incompetence and insecurity. Finally, because extrinsically oriented employees primarily consider other individuals as instruments through which to attain their own material values in the most efficient fashion, they are less likely to develop a trustful and satisfying relationship with others (Duriez, Vansteenkiste, Soenens, & De Witte, in press; Kasser, 2002; Vansteenkiste, Duriez, Soenens, & De Witte, 2005).

On a conceptual level, the results of the present research suggest that people's needs and work values are better defined separately. Some researchers (e.g. Post-Kammer, 1987) have defined intrinsic work values as people's strivings for autonomy and competence in the workplace. In line with Kasser and Ryan (1993, 1996), we would rather consider intrinsic work values as employees' expressions of their natural desire to grow and self-develop, and by being oriented on such outcomes people experience satisfaction of their needs for autonomy, competence and relatedness along the way. Thus, consistent with SDT, we plead for a conceptual distinction between work values and basic needs because this allows for a better understanding of the mechanisms through which the aspiration of intrinsic and extrinsic work values is associated with job satisfaction and well-being.[6]

Future research might attempt to provide more evidence for the mediating role of basic need satisfaction and the distinction between values and needs. For instance, we suggest that intrinsic and extrinsic work values cannot only be pursued to different degrees by individuals, but that managers, and more broadly organizational cultures (Schein, 1985), might promote either intrinsic or extrinsic values, which, in our view, constitutes an important aspect of the process of organizational socialization (Feldman, 1981). Based on recent research in the educational and sport domain (e.g. Vansteenkiste *et al.*, 2004), we suggest that these intrinsic vs. extrinsic work value cultures will have different effects on employees' well-being because they satisfy employees' basic needs to different degrees. Future research might examine these issues.

Limitations

There were several limitations to the present study. First, all data were correlational and cross-sectional, so no conclusions regarding causality can be made. Although the hierarchical regression indicated that the impact of type of work value orientations on well-being outcomes was mediated by need satisfaction, a reciprocal relation between intrinsic vs. extrinsic work value orientations and basic need satisfaction is likely to exist. It seems reasonable that failing to get one's needs met would lead to a stronger endorsement of extrinsic work values. Specifically, the less employees are able to relate

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[6] *In order to provide some empirical evidence for our claim that needs and values should be distinguished conceptually, we performed a second-order principal component analyses, in which we entered the three separate need satisfaction scales (autonomy, competence and relatedness), the three separate intrinsic value scales (affiliation, community contribution and self-development) and the three separate extrinsic value scales (fame, financial success and power). Two factors with an eigenvalue higher than 1 (2.68 and 2.44) were extracted, with the first explaining 29% of the variance and the second explaining 27% of the variance. After varimax rotation, the three need satisfaction scales loaded on the first factor (loading above .72), whereas all six values loaded significantly on the second factor, indicating that values and basic needs need to be conceptually distinguished.*

in an authentic way to others, the less they have a say about what should be done at the workplace, and the less their supervisors provide them with positive competence feedback, the greater the probability that they will hang their self-esteem upon attaining external indicators of worth, such as acquiring financial success and occupying a prestigious function. From such a perspective, an extrinsic value is endorsed in an attempt to compensate for and cope with the anxieties and insecurity that follow from failing to meet basic needs (Kasser, 2002).

Second, all of the measures were self-report, so that at least part of the relations might be accounted for by shared method-variance. To overcome these limitations, it is important for future research to gather measures of positive and negative job outcomes as rated by one's supervisor or colleagues and to assess employee's effective turn-over behaviour. A few previous studies have already found that intrinsic vs. extrinsic values are positively related to social functioning (Kasser & Ryan, 1993) and actual learning behaviour (e.g. Vansteenkiste, Simons, Soenens, & Lens, 2004).

Third, although the first study comprised a representative sample of the Belgian work population, the present research focused only on employees in one culture and historical period. Hence, the cross-cultural generalizability of these findings still needs to be demonstrated. Although a few studies on life values (e.g. Kasser & Ahuvia, 2002; Ryan *et al.*, 1999) and work values (Neyrinck, 2003) have found an extrinsic, relative to an intrinsic, work value orientation to be equally harmful in non-Western societies, SDT maintains that if the meaning and significance of intrinsic and extrinsic (work) values for the satisfaction of individuals' basic needs differs across cultures, the effects of these intrinsic and extrinsic (work) values for one's well-being adjustment will also be different in these different cultures.

Fourth, the question of whether extrinsic value attainment yields positive effects was only indirectly examined through the moderation prediction between income and work value pursuit. Future research might include a direct assessment of work value attainment to examine whether it yields positive effects on job well-being, as would be predicted by aspiration theory (e.g. Andrews & Withey, 1976) and goal-setting theory (Locke & Latham, 2000), but not by SDT. SDT suggests that extrinsic work value attainment is less likely to predict well-being and adjustment, compared with intrinsic work value attainment, because the former is less likely to be associated with basic need satisfaction (see Kasser & Ryan, 2001, for supporting evidence in the realm of extrinsic vs. intrinsic *life* values).

Finally, future research might also examine whether the effects of extrinsic vs. intrinsic work value pursuit on positive job outcomes are still present after controlling for general negative affect or neuroticism. This would be important because extrinsically oriented employees might be less satisfied with their jobs because they are more neurotic (see Solberg, Diener, & Robinson, 2004, for a first attempt in this regard).

Conclusions

In line with the 'promising' message of the American dream, which holds that the pursuit and attainment of materialistic values yields happiness and success (Kasser & Ryan, 1993), many organizations promote a focus on extrinsic values while at work. However, the present research indicates that adopting such a materialistic mind-set yields a number of negative effects, both for the person and for the organization

(Kasser, Vansteenkiste, & Deckop, in press). Specifically, if materialistic work values occupy a more important place in employees' entire work value configuration, they experience more negative job outcomes, less positive job outcomes, and they are more likely to intend to leave their jobs. This is because the pursuit of extrinsic, relative to intrinsic, values is less likely to be associated with the satisfaction of employees' basic needs for autonomy, competence and relatedness. Hence, in order to facilitate employees' job well-being, managers and organizational cultures might do well to promote an intrinsic mind-set, while simultaneously decreasing the importance of extrinsic work values.

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