Master thesis

Consequences of Materialism and Temporal Orientation: Altruism, Environmentalism and Happiness

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Abstract

The aim of the study was to explore how much materialism and temporal orientation influence how altruistic, ecologically conscious and happy individuals are. The current study builds upon and furthers research previously done by Kasser and colleagues (1993; 1996), Self-determination theory (Deci & Ryan, 1985) and construal level theory (Trope & Liberman, 2010). At a medium-sized university in southern Sweden, 173 students were asked to participate in the study. A questionnaire, based on previous measurements, was used to collect self-report data.

Analysis of a correlation matrix showed that materialism did not significantly relate to altruism or pro-ecological behavior. Materialism did however significantly relate to happiness. Temporal orientation did not significantly relate to altruism or happiness. Temporal orientation did however relate to a facet of environmentalism, pro-ecological concern.

Multiple regressin analysis was conducted to test predictions. Temporal orientation and materialism together did not significantly predict any of the dependent variables. The results are likely influenced by cultural aspects, due to Sweden being fairly different from other western nations regarding social and economic policies. The practical implications of this study are that corporate social responsibility (CSR) has been found to be related to both materialism and temporal orientation and hence it should be taken into account in CSR practices in organizations.

Keywords: Materialism, Aspiration, Construal level theory, temporal orientation, altruism, happiness, environmentalism, pro-ecological behavior, Self-determination theory, Corporate social responsibility.
In contemporary society consumerism is a fundamental part of culture, mainly in Anglo-Saxon and western societies. Consumer societies are characterized by having a relatively big part of their economy or GDP based on consumption (Hazlitt, 2010; Bauman, 2007).

Many a philosopher and researchers throughout the ages have pondered on the negative aspects of consumerism. For example the ancient Greek philosopher Epicurus stated a few points as a guideline for a successful and fulfilling life. The main point was to reject the city life and possessions; instead one should enjoy life with friends and being self-sustainable (Higgins & Solomon, 1996; De Botton, 2007).

Later philosophers and scholars have been working with similar inquiries. Erich Fromm, a German Frankfurt scholar and psychoanalyst, observed how society was growing ever more materialistic in mid-20th century. He construed a shift in preferences from what he termed "being" to "having" (Fromm, 2013). The two concepts refer to an orientation toward an experiential life, being. Respectively an orientation toward consumerism, having. Fromm (2013) argued that capital and wealth distract from self-actualization and alienates reflection. Money and possessions are contingently given external incentives and as such distracts from pursuing a more experiential life and self-actualization (Kasser & Ryan, 1993; Fromm, 2013).

Fromm (1991) suggested that man has innate psychological needs that do not have physiological equivalents. With the industrial age, work became a virtue in life along with whatever is currently expected from a good working man. These virtues are sought after in order to achieve happiness and success in life by making and spending money. Although we have achieved material and physiological fulfillment of our needs, never before preceded, our psychological needs have been left unattended both individually and in the organization of work (Fromm, 1991).

People no longer aspire for certain professions and manual labor, but for education and an employment in the service sector where the status and prestige is higher. A study shows that in industrialized, developed nations the service sector makes up for almost 70% of employment (Paulsen, 2010). Expanding on this, Paulsen (2010) describes the menial nature of most of these jobs, with a lot of work time spent on activities unrelated to work. When employees ask for more tasks to fill their work hours they instead get menial tasks, leading to a lot of employees pretending to work. No psychological need is satisfyingly fulfilled in such a work situation.

The aim of this study is to bring further clarification on the consequences of materialism on altruism, pro-ecological behavior and happiness and whether these concepts can be predicted by materialism and temporal orientation. This is important since materialism and temporal
orientation has been found to be related to aspects in organizational settings and ethical
decision making (Tandon, Mishra & Singh, 2011; Hershfield, Cohen & Thompson, 2012)

Materialism

Financial success.
Materialism is a wide concept used in many contexts. Materialism relates to various topics
such as well-being and psychological distress and has been comprehensively researched by
Kasser, Ryan and colleagues (e.g. Kasser & Ryan, 1996; 1993; Kasser, et al., 2014).
Materialism consists of multiple facets (e.g. self-acceptance, affiliation, popularity). The
definition used in the current study and other of materialism used in this line of work is; a set
of values, goals or expectancies relating to the acquisition of wealth and material goods

Financial success is a prominent facet of materialism. Financial success refers to the
aspiration to have a well-paid job, acquiring wealth and expensive possessions. These
being considered signifiers of a successful and fulfilling life (James, 2008). Simultaneously family
life, community and personal growth are encouraged as important foci in life.

The problem however is that these materialistic and social values could appear as
incongruent with each other. Social and communal goals in life, such as investing in family
and friends, may come only secondary to financial pursuit (Kasser, Ryan & Zax, 1995; Kasser
& Ryan, 1993). Previous research has found that the more people value materialistic goals,
the less they value positive and meaningful relationship with others (Kasser et al., 1995).

Furthermore in recent years in organizational studies corporate social responsibility (CSR)
has been of great interest (Tandon et al., 2011). Materialistic values are considered
incompatible with CSR’s consideration towards social and environmental impacts. Studies
have shown that managers that are materialistic will engage in less corporate social
responsible practices than managers that are less materialistic (Tandon et al., 2011).

Social recognition.
Another prominent part of materialistic values is Social recognition. Social recognition refers
to the aspiration towards other people’s praise, recognition and admiration (Kasser & Ryan
1996).

A way to obtain social recognition is by acquiring wealth and possessions to produce
admiration and jealousy. Therefore social recognition has been strongly related to
materialistic values as material possessions often become the medium for this purpose.
Another reason for considering aspiration for social recognition as part of materialism is the externally contingent nature that materialistic values share. Achieving other people’s admiration and praise prompt behaviors that are externally motivated. One could for example choose a certain sport, hobby or taste in music because it leads to other people’s recognition rather than because of its appeal and being fulfilling for oneself.

**Self Determination Theory**

The research on materialism has often been founded on the grounds of Deci & Ryan's (1985) *Self-determination theory*. Self-determination theory takes into account people's motivation behind the choices they make. The theory focuses on the degree of self-determination and self-motivation to behavior.

Being highly materialistic is often synonymous with being mainly externally motivated. External motivations tend to produce self-esteem because of being contingent on external rewards, performance, quality of relationship whereas the opposite is true for individuals that are mainly intrinsically motivated or less materialistic (Kasser, 2002; James, 2008).

The idea is that if someone is paid for doing something they like that they previously had done for free or rather because of intrinsic motivations (i.e. recreation, learning or stimulating), they will stop doing it if they cease to get paid for it (Latham, 2007). This suggests that more extrinsic motivation reduces intrinsic motivation. Research has shown that there is a significant difference in what effect motivations has depending on whether they come from internal or external sources (Deci & Ryan, 1985; Deci & Ryan, 2002).

**Goals.**

Extrinsic goals focus on outcomes that are not inherently satisfying but rather are engaged in for admiration. Extrinsic goals generally produce strive towards wealth, appearance and fame (social recognition and financial aspiration), which all presumably heighten one’s social status and admiration in the eyes of others. Intrinsic goals on the other hand are goals defined as more directly satisfying of inherent psychological needs such as relatedness, personal growth and affiliation - goals that generally provide innate satisfaction (Ryan, 1995; Kasser & Ryan 2001).

According to self-determination theory, people that are primarily driven by extrinsic goals and rewards strive more for social recognition, are more control-oriented and show lower levels of self-actualization and less psychological integration than people driven by intrinsic goals. Extrinsic goals have been suggested to be detrimental to well-being and leading to
psychological distress (Deci & Ryan, 1985; Kasser & Ryan 1993; Ryan & Deci, 2000). Pursuing intrinsic goals generally increases happiness, (Emmons, 1986; Kasser, 2001), feeling confident about attaining and making progress towards this type of goals has also been shown to be positive for well-being (Carver, Lawrence & Scheier 1996; Kasser, 2001; Emmons 1991).

Why this, one might ask? Considering the alleged increase in materialistic values across the western world (James, 2008), why is there still a discernable amount of people that resists being extrinsically motivated (i.e. searching for material gain and social recognition)? Could there be a stable trait that modifies how much one focuses on certain values or goals?

**Construal Level Theory**

Construal level theory (CLT) proposes that people create mental, abstract construal of distal objects; with higher level of abstraction people envisage psychological distances differently (Trope & Liberman, 2010). Psychological distance is a subjective experience about the proximity of objects relative to oneself, the present. The concept refers to an ego-centric construct in which the reference point for all mental, abstract objects is the self. Time, space and social distance all constitute different dimensions of psychological distance. People traverse these psychological distances by using mental construal processes. Memories, past experiences, imagining other people's reactions, future plans and speculations about the past must effectively be construed in order to be perceived by our conscious (Trope & Liberman, 2010). Simply put: "Construal levels thus expand and contract one’s mental horizon." (Trope & Liberman, 2010: p. 440).

Research has shown that events that are distant in time are represented more abstractly (Liberman, Sagristano & Trope, 2002) and abstract mental processing creates perceptions of larger temporal distance (Liberman & Förster, 2009). In other words, the relationship between abstraction and distance is bidirectional.

Research suggest that people are generally prone to either have a preference for long term thinking or short term thinking, and that this preference is relatively stable over time (Agerström & Björklund, 2013; Strathman et al., 1994). These preferences correspond to either having proximal or distal focus for psychological distance. Hence people have different temporal frames that dominate their mental world (Strathman et al., 1994; Zimbardo & Boyd, 1999).
Considerations of future consequences.

A new line of research applies a different method in assessing further dimensions of CLT. A different construct has been conceptualized, Consideration of Future Consequences (CFC), which explains certain variance that other measurements do not, and found to be meaningful in that it assess and explain a substantial variance in behavior (Stratham et al., 1994). The CFC measures "...the extent to which individuals consider the potential distant outcomes of their current behaviors and the extent to which they are influenced by these potential outcomes"(Stratham, 1994: p. 743). CFC taps into the intrapersonal struggle between behavior and two sets of possible outcomes, immediate and future outcomes. Whether individuals favor one or the other in their future considerations are, as previously noted, argued to be a stable characteristic (Stratham, 1994).

Temporal orientation is measured on a continuum; at one end are individuals who have very short-term or proximal focus, these individuals focus on their immediate needs and concerns and are expected to act upon these without future considerations. On the other end of the continuum are individuals who tend to consider future outcomes into their actions and behavior. These individuals believe that certain behaviors will lead to future benefits and are even willing to sacrifice immediate pleasure and convenience in order to acquire desirable future states (Strathman et al., 1994; Agerström & Björklund, 2013).

CFC and morality.

Any moral reasoning has at least a certain level of abstraction that significantly varies from reasoning that is more concrete and immediate. Altruistic values and principles constitute an abstract order of constructs that can potentially be applied to a variety of contexts (Eyal & Liberman, 2012), suggesting that some people are more morally conscious than others. The level of abstraction at which a person "operates" can be temporarily manipulated. Temporal distance affects moral concern due to level of mental construal, contemplating events that are temporally distant fosters ability to think and act morally (Trope & Liberman, 2010; Rogers & Bazerman, 2008).

A study showed that people who feel more disconnected from their future selves were more prone to act unethically in their decision making, judgments and behavior (Hershfield, et al., 2012). In organizational settings low future self-continuity have been related to unethical business decisions, endorse inappropriate negotiation strategies, make false promises and deceive for monetary gain (Hershfield et al., 2012).

By linking temporal orientation to the mechanics of materialsim, extrinsic- and intrinsic
motivation, one would expect to find a similar divide between people who focus on extrinsic, or proximal, goals and individuals who focus on intrinsic, or distal, goals.

Another set of research has linked these modes of thinking to morality (e.g. Agerström & Björklund, 2013) which in turn produces questions on whether one could find similar links to pro-ecological behavior. Indeed, also pro-ecological behavior demands that one has a broader perspective of their actions and their impacts on life and the planet itself, especially for managers and organizations in powerful positions.

**Social Value Orientation**

Social value orientation (SVO) is an individual’s pattern of distribution of resources between the self and another person. People have been shown to have different social value orientations. Economic games have shown that individuals do evaluate both their own outcome, and others (Van Lange, 1999).

Social value orientation reflects the differences in how people reason regarding collective and self-interests in interpersonal and individual-group relationships (Corral-Verdugo et al., 2009). It has been shown that individuals vary in their approaches, judgments, and responses regarding others and that these differences can be conceptualized and measured (Van Lange, 1999).

Several studies have shown that individuals that are pro-social are more cooperative than individuals who are more pro-self (Corral-Verdugo et al., 2009) and that pro-social orientation is related to sustainable choices in everyday life (Cameron, Brown & Chapman, 1998). Altruism could, we would argue, be an elemental part of pro-ecological behavior. A body of research supports this idea, for example Schultz (2001) suggests altruism as fundamental for motivation to maintaining environmental protection.

Given the research presented one could expect to find a relation between social value orientation and both materialism and time orientation. Being altruistic and caring for the environment postulates long term mode of thinking, and whilst material acquisition and fame only benefit the individual, caring and fostering a healthy community and family life benefits more people.

**Pro-Ecological Behavior**

There is little doubt left that anthropogenic impact has a significant role on the environment and ecological systems (Schlesinger, 2009; Rochman et al., 2015). This is important for
becoming a sustainable society and to take responsibility for our actions and behaviors.

Pro-ecological behavior is defined as purposeful and effective, acting towards conserving natural resources. An array of pro-ecological research has been conducted on recycling, water conservation and ecological persuasion of others to mention a few (for an overview see César, Victor, Blanca & Maria Fernanda, 2013).

Pro-ecological behavior has been linked to materialism. Some argue that the pursuit of economic growth on both national and global level has put significant strain on the planet's resources (Hamilton, 2010; Jackson, 2009; Kasser, 2009). Hurst et al. (2013) found a negative relationship between citizens’ level of materialism and their nation subsequent care for the environment.

The environment takes a long time to display inevitable and irreversible changes; it takes long periods of time for both negative- and positive consequences of human action and behavior to uncover. Temporal orientation of individuals is an important factor in their degree of pro-ecological behavior, several studies has found that future oriented individuals often are pro-environmentally oriented (Corral-Verdugo et. al., 2009; Corral-Verdugo & Pinheiro, 2006; Joireman et al., 2001).

Happiness

Happiness has been discussed and researched for a long time as a fundamental part of human well-being. Happiness is a rather stable state of mind that is affected more by everyday life; great life events, circumstances and demographic variables impacts happiness less than people intuitively believe (Diener, 2000). Although happiness seem like a difficult concept to pinpoint and measure, studies indicate that most people do know when they are happy or not, and what it means to be happy (Freedman, 1978). Happiness is usually measured using self-reports as this seems more reliable than physiological measures (Lyubomirsky & Lepper, 1999).

The pursuit of happiness has many paths, some people search and prefer instant rewards of happiness while other look for some greater long term happiness such as spirituality and healthy family life. Presented research in self-determination theory would lead us to think that happiness cannot be reached through extrinsic goals such as acquiring wealth and admiration, but rather by pursuit of intrinsic goals.
Current Study

The current study emanate from self-determination theory developed by Deci & Ryan (1985) and the work previously done on materialism (e.g. Kasser & Ryan 1993; 1996; 2001). Previous research on materialism has not taken temporal orientation (Stratham et al., 1994) into account. The current study will investigate the relationship between aspiring for external goals, materialistic motivations in terms of financial success and social recognition, one's temporal orientation and how these affect one's social value orientation, altruism, happiness and pro-ecological behavior respectively.

The results would increase the knowledge of how materialistic values and time orientation relate to other important variables such as environmentalism and altruism. The implications would offer a greater understanding of how managers and CEO's lead in relation to their social and intrapersonal environment. Climate changes might require actions and long term planning, which make future orientation and altruistic reasoning relevant traits for managers, world leaders and citizens alike. This would give reason and provide support for changing current organizational practices into those more akin to corporate social responsibility (CSR).

Hypothesis.

Previous findings lead us to hypothesize.

Hypothesis 1. Individuals who are more materialistic are less future oriented, less altruistic and show less concerned for the environment.

Hypothesis 2. We expect to reproduce previous findings that more materialistic people rate lower on happiness.

Hypothesis 3. Individuals who are future oriented are expected to show more concern for the environment and be more altruistic.

Hypothesis 4. Materialism and future orientation would predict environmental concern, altruism and happiness.

Method

To test the hypotheses a questionnaire was developed by merging several measurement scales into one. Several measurement scales were acquired for this purpose. The "Aspiration index" by Kasser & Ryan (1993; 1996; 2001) assesses multiple dimensions of individual levels of materialism. Participants temporal orientation was assessed using "Consideration of Future Consequence" (CFC) developed by Stratham et al. (1994). Social valence was assessed using
"Social valence orientation" (SVO) questionnaire (Van Lange, 1999; Van Lange & Kuhlman, 1994). Lastly to measure level of pro-ecological behavior (Tapia-Fonllem et al., 2013) and happiness (Lyubomirsky & Lepper, 1999) we used a measurement that assess several aspects of these variables. In this last questionnaire were also included some items that measured altruism (Tapia-Fonllem et al., 2013). Altruism items were included partly to both validate the SVO measurement and to analyze correlation to altruistic and pro-ecological behavior. This also allowed for testing altruism as a continuous variable since SVO is categorical.

All of these questionnaires have been validated in previous studies. Since the current questionnaire had been constructed for this study, containing a set of novel items as well as translated scales, a pilot study was conducted before the main study was initiated. This facilitated identifying problems in the translation from English to Swedish of the items and other mistakes, flaws or poor instructions.

Pilot Study

The pilot study was conducted in the same university as the main study, though at a different location. A sample of 28 undergraduate students were used, all females. Age was not asked for in the pilot study because it was deemed irrelevant for the purpose of the trial.

Some mistakes and flaws in the design of the questionnaire were found and subsequently rectified. Most of these were about translation, layout and instructions of some parts in the questionnaire, other were minor tweaks.

Since the questionnaire was altered after this pilot study, the data collected were deemed ineligible for use in the main study. After the pilot study we ended up with a final version of the questionnaire that would suffice for our intentions in the main study.

Main Study

Participants & procedure.

The main study was conducted at a university in southern Sweden, using a sample of 173 (62 men, 79 women and 32 unspecified) undergraduate students from different faculties. The age of participants ranged from 19 - 46 ($m=25$, $sd=5.4$) years. Groups were selected across the whole university to capture diversity of studies (i.e. social, engineering, economics and so on).

The participants were first given information and a short introduction about the questionnaire. They were also informed about confidentiality and asked for informed consent.
They were then handed the questionnaire which they completed in the presence of the authors. The participants were not compensated for their participation.

**Instruments.**
The final questionnaire that emerged to be used in the study was a fusion of multiple measurements.

**Aspiration index.**
The aspiration index was developed by Kasser and colleagues (1993; 1996) to tap into both individual’s extrinsic- and intrinsic motivation. It measures the aspiration towards several concepts. The current version used contains 57 items across eleven subscales, from motivation, and financial success to spirituality and hedonism (Grouzet, et al., 2005). Past research has previously verified the aspiration index using factor analyses (Kasser & Ryan, 1996), test-retest reliability has also been demonstrated and internal reliability has been tested and verified (Kasser & Ryan, 1993; Kasser & Ryan, 1996). For our purposes we used items from the "Financial success" (e.g. "You will be financially successful", "You will have expensive possessions" & "You will have a well-paid job") and "Social Recognition" ("You will be famous" & "You will have a job with high social status") subscales to measure extrinsic motivation and materialism.

A principal component analysis was conducted in order to test and verify that our materialism scale contained the two intended facets. Multiple factors were extracted out of which two were meaningful and identified as corresponding to “financial success” and “social recognition”, having eigenvalues of 4.1 and 1.6.

A reliability analysis was performed for the two subscales and satisfying values were found for both financial success (α= 0.85) and social recognition respectively (α= 0.74). Since we merged the two subscales in our questionnaire and also excluded some items, a reliability analysis was conducted for the whole scale showing a satisfying result (α=0.85).

**Social valence orientation.**
The SVO scale consisted of nine items that measures social valence orientation. This is considered to be a stable preference for distribution of resources between oneself and another (Van Lange, 1999). The aim of the questionnaire is to identify participant's preferences for different distributions. For our purposes we reduced the number of items from nine to six, keeping the possibility to distinguish the three groups by the same threshold while keeping the other items intact.
The questionnaire presents in each item three hypothetical "self – other" distributions for the participants to choose from. Each of these three options has different distributions. Altruist response is when the payoff for other and self is equal. Egoist response is when participants choose to maximize their own payoff regardless of the other. Competitor response is where the participants aim to maximize the difference between one's own payoff and the other's.

The participants have to score at least two-thirds, four out of six in our study, of their answers into one of the three possible social value orientations (Van Lange, 1999) to be considered for classification. If the scores were inconsistent, they were not classified. Previous studies have been able to reproduce and verify findings using SVO in different settings and with different samples (Van Lange & Kuhlman, 1994; Simpson & Willer, 2008).

**CFC.**
Participants’ temporal orientation was measured using the consideration of future consequences scale (Strathman et al., 1994). The individual differences in temporal orientation are considered stable. The scale consists of twelve items that measures individual’s consideration of consequences of their behaviors and actions in the immediate present contra future.

The CFC scale is one-dimensional where low CFC indicates an immediate focus on needs, while high CFC score indicates more focus on distal goals (Agerström & Björklund, 2013). The items offer various morally neutral statements that the participants mark to what extent they believe these statements to be characteristic of them on a scale ranging from 1 (extremely uncharacteristic) to 5 (extremely characteristic). Example of items were "I consider how things might be in the future, and try to influence those things with my day to day behavior" and "I only act to satisfy immediate concerns, figuring the future will take care of itself". Internal consistency has previously been reported to be good (α=0.83 & 0.81) (Agerström & Björklund, 2013; Strathman et al., 1994). This study also acquired a satisfying value (α=0.75).

**Pro-ecological behavior.**
In order to assess pro-ecological behavior a modified version of a questionnaire was used that originally assessed sustainable behavior (SB), which included scales of pro-ecological and frugal actions and also altruistic and equitable behaviors (Tapia-Fonllem et al., 2013) and some scales developed by Corral et al., 2008 (in Tapia-Fonllem et al., 2013). Originally it consists of six scales such as "frugality" and "intention to act [sustainably]". Ensuing studies added another two subscales (Tapia-Fonllem et al., 2013), taken from the pro-ecological
behavior (Kaiser, 1998) and happiness (Lyubomirsky & Lepper, 1999), from which the current study drew ideas for items.

For the purposes of the current study we intended to measure an aggregated dimension of pro-ecological behavior. Also items were included that potentially corresponds to both pro-ecological behavior and altruism in order to both validate the SVO measurement and to analyze correlation to altruistic and pro-ecological behavior. The altruism sub-scale will be used to validate the SVO in order to find if they both measure the same concept. This did allow for using multiple regression analysis with altruism.

A few items were taken from four of the various subscales available (Tapia-Fonllem et al., 2013) that were deemed relevant and meaningful for an aggregated pro-ecological behavior scale (e.g. "Altruism", "intention to act" and "indignation due to environmental damage"). Altruism was treated separately as the items in this factor ("Donate blood", "Help someone who stumbled") were not directly connected to pro-ecological behavior. The items in the original measurements vary in the scale used (e.g. 1-3, or 1-5). This was modified for the current study to a bipolar Likert scale ranging from 1 ("not at all") to 5 ("very much").

A principal component analysis was conducted in order to extract the various subscales in the final questionnaire. The following four meaningful factors were extracted, eigenvalues are presented in parenthesis: pro-environmental concern (5.9) ("Prone to reuse products" & "Prone to encourage friends and family to recycle") reacting to environmental harm (indignation) (2.4) ("Indignant when observing littering" & "Indignant when observing industry dumping waste"), altruism (1.7) ("Prone to donate clothes" & "Prone to donate to charity") and pro-ecological behavior (1.5) ("Prone to use more water than necessary"). All of these four largely corresponds to the original subscales. The pro-ecological behavior facet was excluded in the main analysis due to containing only two items.

Previous reliability analysis gives acceptable internal consistency, for pro-ecological behavior ($\alpha=0.72$), for altruism ($\alpha=0.80$) and for intention to act ($\alpha=0.76$). Current study achieved internal consistencies of pro-ecological concern ($\alpha=0.86$), Indignation ($\alpha=0.76$), Altruism ($\alpha=0.73$) and pro-ecological behavior ($\alpha=0.45$).

**Happiness.**

To assess general happiness Lyubomirsky & Lepper's (1999) scale was used. This measurement assesses global subjective happiness and consists of three items (e.g. "How happy are you in comparison to your friends"). The scale has been developed and validated in
the U.S (Lyubomirsky & Lepper, 1999). Originally the scale uses a 7-point Likert format. Reliability analysis has previously been reported as good ($\alpha=0.83$). The current study had a similar value ($\alpha=0.79$).

**Current instrument.**
The instrument used in this study consisted of shortened and modified versions of the previously presented instruments. It consisted of 54 items across five subscales, materialism with 11 items (i.e. financial success, and social recognition), SVO with 6 items, CFC with 12 items, pro-ecological behavior (i.e. pro-environmental concern, reacting to environmental harm, altruism and pro-ecological behavior) with 22 items and finally happiness with 3 items. This study treats altruism as a separate dependent variable. Altruism will be used to verify SVO and possibly be used in its place because of the different level of measurement.

All of the scales but CFC were reduced in number of items and some were reformulated and had their range of available answers modified to better fit with the questionnaire as a whole relative to the originals. All of the scales but SVO utilized the bipolar Likert scale, ranging from 1 (not at all) to 5 (decisive). In CFC the labels were 1 (extremely unlike) to 5 (extremely characteristic). The SVO scale was kept intact except for the three items removed. The SVO scale is a categorical variable, while the "Altruism" factor is a continuous variable which allowed for using additional statistical measures. Both factor- and reliability analyses were conducted, as reported above, in order to verify and validate our produced questionnaire.

**Results**

Table 1 shows the means and standard deviations on the average score on all variables across the whole sample. Apart from descriptives the table shows how much of a drop-out rate we had for the different variables and that our sample rated lower on materialism in comparison to the other variables.
Table 1 Descriptives

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aspiration</td>
<td>173</td>
<td>2.82</td>
<td>.78</td>
</tr>
<tr>
<td>Social recognition</td>
<td>171</td>
<td>2.44</td>
<td>.78</td>
</tr>
<tr>
<td>CFC</td>
<td>172</td>
<td>3.46</td>
<td>.50</td>
</tr>
<tr>
<td>Happiness</td>
<td>172</td>
<td>3.60</td>
<td>.76</td>
</tr>
<tr>
<td>PEC</td>
<td>167</td>
<td>3.03</td>
<td>.81</td>
</tr>
<tr>
<td>Indignation</td>
<td>171</td>
<td>3.35</td>
<td>.73</td>
</tr>
<tr>
<td>Altruism</td>
<td>171</td>
<td>3.82</td>
<td>.75</td>
</tr>
</tbody>
</table>

Note. Average score on the variables (1-5)

Validating SVO.

Because of the drop-out rate on the SVO scale (14% drop-out), the scale was validated by conducting a Univariate Analysis of Variance to see if there were any differences on Altruism on the different levels of SVO. This allowed using the Altruism and SVO scale interchangeably.

A significant effect of Altruism on levels in SVO was found ($F (2, 145) = 3.92, p = .022$). The altruistic group on the SVO scale rated highest on Altruism, the competitive group lowest and the egoistic group scored intermediate (for an overview, see Figure 1). Post-hoc test further revealed a significant difference between the altruistic group and the competitive group ($p = .020$). The same effect of Altruism on levels in SVO was found for both men ($F (2, 57) = 3.75, p = .03$) and women ($F (2, 69) = 2.99, p = .057$). For women it was not significant however a strong trend was present.

![Altruism](image)

Figure 1 Altruism across levels on SVO
Main Analysis

The present study was designed to address a number of hypotheses around materialism and future orientation. Hypothesis 1, that high materialism correlates with low temporal orientation, less altruism and less pro-ecological behavior, was not confirmed.

First of all a bivariate correlations was conducted to test this, that materialism (i.e. Financial aspiration and social recognition) correlated negatively with CFC, indignation, PEC and altruism. A correlation matrix was produced to find any significant correlations (see Table 2). Financial aspiration and Social recognition did not significantly correlate with any variable, disconfirming the first hypothesis.

Hypothesis 2 was that materialistic aspirations correspond to less happiness. This hypothesis was partly confirmed. Financial aspiration did correlate negatively with happiness, but social recognition did not (see Table 2).

Hypothesis 3 was that future oriented people would show more concern for the environment and be more altruistic. This hypothesis was not confirmed (See table 2), CFC did not correlate with PEC, indignation or Altruism.

Table 2 Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Altruism</th>
<th>Indignation</th>
<th>PEC</th>
<th>Happiness</th>
<th>CFC</th>
<th>Social recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aspiration</td>
<td>-.096</td>
<td>-.004</td>
<td>.102</td>
<td>-.213***</td>
<td>-.107</td>
<td>.481***</td>
</tr>
<tr>
<td>Social recognition</td>
<td>-.051</td>
<td>.038</td>
<td>-.005</td>
<td>.012</td>
<td>-.56</td>
<td></td>
</tr>
<tr>
<td>CFC</td>
<td>.094</td>
<td>.074</td>
<td>.140</td>
<td>-.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>.282***</td>
<td>.044</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEC</td>
<td>.411***</td>
<td>.588***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indignation</td>
<td>.165*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01, ***p < .001

Hypothesis 4, if future orientation and materialism predicted pro-ecological behavior, altruism and happiness, was tested using several multiple regression analyses. The hypothesis was partly confirmed. When tested together in the same model Future orientation and materialism did significantly happiness.

Financial Aspiration, Social Recognition and CFC were entered as predictors in the MRA using the “enter” method. Enter method were used because there were no reason to believe the variables to occur in any particular order. The criterion variables were PEC, Indignation,
Altruism and Happiness respectively. Since the drop-out rate for SVO was higher than for our continuous Altruism variable we used the continuous variable in the multiple regression analyses.

With PEC as criterion a non-significant model emerged for materialism and CFC \((F (3, 160) = 2.29, p = .08)\). The model explained 4.1% of the variance in PEC \((\text{Adjusted } R^2 = .041)\). Materialism did not predict PEC however CFC was a significant predictor of PEC \((b = .252, SE B = 0.125, \beta = .157, p = .046)\).

With Indignation as criterion variable a non-significant model emerged \((F (3, 164) = .436, p = .728)\). The model explained 1.0% of the variance in indignation \((\text{Adjusted } R^2 = .010)\). Neither Materialism nor CFC predicted indignation.

With Happiness as a criterion a significant model emerged for materialism and CFC \((F (3, 165) = 3.75, p = .012)\). The model explained 5% of the variance in Happiness \((\text{Adjusted } R^2 = .050)\). Financial Aspiration was a significant predictor of Happiness \((b = -.280, SE B = 0.84, \beta = -.288, p = .001)\). CFC did not predict Happiness while financial aspiration did.

With Altruism as criterion a non-significant model emerged for materialism and CFC \((F (3, 164) = .834, p = .477)\). Neither materialism nor CFC did predict altruism.

**Gender Differences**

Some preliminary testing was conducted to see if there were any gender differences. Separate multivariate analyses of variance were conducted to spot differences in our variables. Both analyses showed significant effects for the independent variables \((\text{Roy’s Largest Root} = .64, F (3, 135) = 2.88, p = .039)\) with an effect size of \(\eta^2 = .067\), and respectively the dependent variables \((\text{Roy’s Largest Root} = .106, F (4, 129) = 3.42, p = .011)\) with an effect size of \(\eta^2 = .096\). Follow-up *t-tests* revealed that women rated significantly higher on Financial Aspiration than did men \((t (139) = -2.8, p = .006)\). Furthermore women rated significantly higher on Altruism than did men \((t (138) = -3.14, p = .002)\) (For descriptives see Tables 3 & 4).
### Table 3 Descriptives for men

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aspiration</td>
<td>63</td>
<td>2.58</td>
<td>.78</td>
</tr>
<tr>
<td>Social recognition</td>
<td>62</td>
<td>2.40</td>
<td>.70</td>
</tr>
<tr>
<td>CFC</td>
<td>62</td>
<td>3.44</td>
<td>.50</td>
</tr>
<tr>
<td>Happiness</td>
<td>61</td>
<td>3.67</td>
<td>.78</td>
</tr>
<tr>
<td>PEC</td>
<td>59</td>
<td>2.86</td>
<td>.79</td>
</tr>
<tr>
<td>Indignation</td>
<td>61</td>
<td>3.31</td>
<td>.74</td>
</tr>
<tr>
<td>Altruism</td>
<td>61</td>
<td>3.55</td>
<td>.70</td>
</tr>
</tbody>
</table>

**Note.** Average score for men

### Table 4 Descriptives for woman

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aspiration</td>
<td>79</td>
<td>2.95</td>
<td>.75</td>
</tr>
<tr>
<td>Social recognition</td>
<td>78</td>
<td>2.40</td>
<td>.78</td>
</tr>
<tr>
<td>CFC</td>
<td>78</td>
<td>3.40</td>
<td>.51</td>
</tr>
<tr>
<td>Happiness</td>
<td>79</td>
<td>3.49</td>
<td>.78</td>
</tr>
<tr>
<td>PEC</td>
<td>76</td>
<td>3.07</td>
<td>.85</td>
</tr>
<tr>
<td>Indignation</td>
<td>78</td>
<td>3.31</td>
<td>.74</td>
</tr>
<tr>
<td>Altruism</td>
<td>79</td>
<td>3.94</td>
<td>.75</td>
</tr>
</tbody>
</table>

**Note.** Average score for women

Since we found significant gender differences we tested to see if gender could have biased our results in our main analysis. Bivariate correlations were conducted for men and women separately (Tables 5 & 6).

For men the result was very similar to the whole sample. Financial Aspiration still correlated negatively with Happiness. Furthermore Financial success correlated negatively with Altruism, CFC significantly correlated positively with PEC.

For women the correlations differed a lot from the whole sample. Financial aspiration did not correlate with happiness. CFC did not significantly correlate with any of the pro-ecological facets.
Table 5 Correlations for men

<table>
<thead>
<tr>
<th>Variables</th>
<th>Altruism</th>
<th>Indignation</th>
<th>PEC</th>
<th>Happiness</th>
<th>CFC</th>
<th>Social recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aspiration</td>
<td>-.293*</td>
<td>-.035</td>
<td>-.021</td>
<td>-.346**</td>
<td>-.129</td>
<td>.466***</td>
</tr>
<tr>
<td>Social recognition</td>
<td>-.061</td>
<td>.051</td>
<td>-.209</td>
<td>.046</td>
<td>-.132</td>
<td></td>
</tr>
<tr>
<td>CFC</td>
<td>.162</td>
<td>.210</td>
<td>.395**</td>
<td>-.010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>.343**</td>
<td>.042</td>
<td></td>
<td>-.032</td>
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<td></td>
</tr>
<tr>
<td>PEC</td>
<td>.432**</td>
<td>.539***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indignation</td>
<td>.248</td>
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<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note. *p < .05. **p < .01. ***p < .001

Table 6 Correlations for woman

<table>
<thead>
<tr>
<th>Variables</th>
<th>Altruism</th>
<th>Indignation</th>
<th>PEC</th>
<th>Happiness</th>
<th>CFC</th>
<th>Social recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aspiration</td>
<td>-.083</td>
<td>-.048</td>
<td>.142</td>
<td>-.153</td>
<td>-.151</td>
<td>.597***</td>
</tr>
<tr>
<td>Social recognition</td>
<td>-.104</td>
<td>.046</td>
<td>.048</td>
<td>.018</td>
<td>-.094</td>
<td></td>
</tr>
<tr>
<td>CFC</td>
<td>.062</td>
<td>-.006</td>
<td>.028</td>
<td>-.120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>.343**</td>
<td>-.144</td>
<td>.009</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEC</td>
<td>.300**</td>
<td>.605***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indignation</td>
<td>.015</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note. *p < .05. **p < .01. ***p < .001

Given the gender differences found, gender was added as a predictor in MRA, to be tested in a model together with materialism and CFC.

With PEC as criterion, with gender added as a predictor, a significant model emerged ($F(4, 128) = 2.48, p = .047$). The model explained 4.3% of the variance in PEC (Adjusted $R^2 = .043$). However gender was not a significant predictor of PEC. CFC remained, a significant predictor of PEC (b = .314, SE B = .142, $\beta = .191, p = .029$), the prediction however was stronger when adding gender as a predictor.

With happiness as criterion, with gender added as a predictor a significant model emerged ($F(4, 133) = 3.79, p = .006$). The model explained 7.5% of the variance in happiness (Adjusted $R^2 = .075$). However gender was not a significant predictor of happiness. Financial aspiration was just as in the main analysis a significant predictor of happiness (b = -.359, SE B = .10, $\beta = -.362, p > .001$). However when adding gender as a predictor Social recognition also became a significant predictor as opposed to in the main analysis. (b = .219, SE B = .101,
\[ \beta = .213, p = .031. \]

With altruism as criterion and after adding gender as a predictor a significant model emerged \((F(4, 133) = 3.76, p = .006)\). The model explained 7.5% of the variance in happiness (Adjusted \(R^2 = .075\)). Gender was found to be a significant predictor of altruism \((b = .458, SE \beta = .129, \beta = .301, p = .001)\).

With Indignation and CFC as criterion variables the models were still non-significant when adding gender as a predictor.

**Discussion**

Findings provided support for materialism being negatively related to happiness, while materialism did not correlate with altruism, temporal orientation and pro-ecological behavior. Furthermore temporal orientation did not correlate with altruism or happiness. However, temporal orientation did predict one aspect of pro-ecological behavior.

The MRA did not confirm our hypothesis, only happiness could be predicted by materialistic aspirations and temporal orientation. The findings in the current study gives support for previous research by Kasser and colleagues (1993, 1996, 2001) and Deci and Ryan (2001) that being materialistic, or having materialistic, extrinsic aspirations are related to less well-being, of which happiness is an important part. Future orientation did predict a facet of pro-ecological behavior, pro-ecological concern, granting some support for CFC being related to environmentalism and partly to altruism. It should be noted that many of the aforementioned relationships were driven by males. For females, these correlations were not statistically significant.

**Materialism**

The first hypothesis was threefold; materialistic aspirations relation to CFC, pro-ecological behavior and altruism. No significant correlations were found between the two materialism variables and the other.

No significant result was found for CFC in relation to aspiring for financial success and social recognition. A relation between being materialistic and temporal orientation was expected given that studies has shown that present-time oriented people are characteristically driven by instant gratification and preference for behaviors with immediate rewards (Zimbardo & Boyd, 1999), much like people rating high on materialistic values (Kasser, 2001).
In our study we found no relation between materialistic aspirations and environmentalism neither in the correlation nor the regression analysis. In a meta-analysis by Hurst et al. (2013) it was shown that materialism has a negative relation with both pro-environmental attitudes and behaviors, and that materialistic people are less likely to believe that humans are the cause of environmental problems. The analysis however used studies mainly from the Anglo-Saxon countries. Some of the studies used from other countries showed different or even completely opposite results, suggesting that material acquisition does not necessitate disregard of environmental issues (Gatersleben et al., 2010). This calls into question the universality of the idea that materialistic values are at odds with protecting the environment. Maybe materialistic values have a different meaning in other countries outside of the Anglo-Saxon sphere (Hurst et al. 2013) for example in Sweden.

Our study showed no relation between materialism and altruism. Further, the regression analysis revealed that neither materialism nor CFC did predict altruism. Other studies have shown the same relation to both materialism and altruism. People who scored higher on materialism were not necessarily less altruistic (Gatersleben et al., 2010). Furthermore it has been previously shown in a meta-analysis that the relation between altruistic attitudes and materialism become less negative the more recent the study was published (Hurst et al., 2015). Altruism is a interesting concept with this in mind. One could always argue that true altruism does not exist, that self-interest is still at the heart of the altruistic action or behavior (Dawkins, 2006).

The hypothesis, that materialism would correlate and predict happiness, was partly confirmed. The finding was in line with self-determination theory (Deci & Ryan, 1985) and research done by Kasser and colleagues (1993, 1996). Self-determination theory suggests that a negative relation should be found for both our materialism facets and happiness. No such relation was found in the current study. The two aspects of materialism had different effects on happiness. One facet of materialism, financial aspiration was found to be negatively correlated and predicts with happiness while the other, social recognition, did not relate nor predict happiness.

Financial aspiration significantly predicted happiness, in line with the hypothesis. The MRA showed that aspiring toward financial success decreased how happy one felt. This confirms previous research that extrinsic goals are generally detrimental for happiness and well-being (Deci & Ryan 2002). Being occupied with goals and aspirations that are extrinsic detracts from spending time on one's intrinsic goals and aspirations. People are motivated for different
reasons in various contexts. This confirms previous findings by Kasser and colleagues (e.g. 1993; 1996; 2001). Dittmar et al. (2014) found little or no support for the goal attainment hypothesis that materialism’s negative association to well-being disappears if people succeed in their materialistic goals. Extrinsic goals are not themselves detrimental to well-being or make people unhappy. They simply do not heighten either happiness or well-being compared to intrinsic goals (Sheldon, Ryan, & Reis, 1996).

A possible explanation for why social recognition did not have a significant relation with happiness is that in Sweden, being famous is not as revered and sought after as for example in the United States. A quick look at Hofstedes database (Dimensions of national culture, n.d.) suggests that Sweden rates much lower on masculinity in comparison to the United States. This would suggest that in Sweden success and standing out from the crowd is less admirable than in the United States, possibly because of the “Jante law”. The result might therefore be due to cultural aspects.

**Temporal orientation**

The third hypothesis was threefold. CFC was hypothesized to relate and predict pro-ecological behavior, altruism and happiness. This hypothesis was partly confirmed, CFC did predict a facet of pro-ecological behavior, no other significant relation was found.

There was evidence for CFC being a strong predictor for pro-ecological concern, one aspect of pro-ecological behavior. The other aspect, indignation toward environmental harm was not predicted by CFC. These findings suggest that future orientation does partially predict whether a person displays some pro-ecological behavior. These are not unexpected findings since Sweden is generally considered environmental friendly, always having some environmental concern in mind (Bråkenhielm, 2013).

**Gender differences**

The results differed when taking gender into account. The findings suggest that women are more altruistic than men. Further the correlation matrix showed that the more men aspired towards financial success, the less altruistic they rated. This suggests that materialistic aspiration is incongruent with altruism, for men at least.

Woman rated higher on financial aspiration, however for women happiness did not relate to material acquisition. A possible explanation for this could be that men generally believe that material acquisition will increase their happiness (Segal & Podoshen, 2013).
Surprisingly, social recognition was a strong predictor of happiness, but only when gender was added to the analysis. This could suggest there is a gender difference in how social recognition predicts happiness; however, we have no explanation for this.

As previously reported, future orientation was found to be related to the aspect pro-ecological concern but not indignation. This effect was significant for men but not for women. Multiple studies have shown that altruism and caring for the environment are related to the extent that they are highly overlapping concepts. Women are thus expected to be more environmentally concerned than men, since they rate higher on altruism (Dietz, Kalof & Stern, 2002).

Limitations

Methodological limitations.
Students were the intended population to study due to several reasons. Although student samples are often considered convenient, they are because of convenience also the primary population used in research (Henrich et. al., 2010). Because of this, a student sample is a good start for research questions in novel contexts as it makes it easier to compare with previous findings, even though one cannot assume students to be representative of the general population. A problem in the current study was that in the student sample used, faculty and area of study was not asked for. Students generally are a group with a broad spectrum of attitudes and ideas. It is therefore difficult to acquire a sample that is fairly representative even of all students.

Because the study was conducted in Sweden, all of the measurements except the CFC-scale were translated from English to Swedish. This could have caused some alterations in how the items were perceived and conceptualized by the participants.

Another limitation with the measurement was that the exclusion criteria for items were arbitrary. In the process of creating the questionnaire, we mainly focused on reducing the quantity of items but also on removing items that could potentially disrupt the reliability and validity of the questionnaire relative the aim of the study. Fillers were removed and instead all questions that did at first seem meaningful in themselves were kept. Because of these manipulations and fusion of multiple measurements into a single one, a pilot study was conducted to reveal any flaws in order to rectify these.

A problem that is also common to most empirical research when using self-report data is that of social desirability. This study employs several variables that might potentially trigger
desirable answers.

A major potential problem related to the questionnaire used was the SVO-scale. Due to it being of a different character than the other measurements it caused certain confusion and prompted the authors to clarify how to fill it in during the data collection. This led to several participants leaving this scale incomplete or obvious random filled in answers (e.g. all answers were "A"). Nevertheless the SVO-scale was later validated in our study and found to largely correspond to the altruism measurement.

Furthermore, all our tests were correlational in nature; therefore no causal relations can be inferred. Although a regression analysis allows us to predict certain variables and their influences, a better method would be canonical regression. This would greatly increase understanding of how our variables actually are interrelated. However, this was outside the frame of the study. Another preferred method would be to deploy an experiment, to have more control over external influences. This would increase internal validity of the test.

**Construct validity.**

One cannot but avoid the issue that is common to all empirical work, that of what is really being measured. It is important to note that there can be several ways of conceptualizing materialism. For our purposes we used two potential facets, aspiration for financial success and for social recognition, of being materialistic in relation to the definition previously offered. There is a given problem with this definition, especially as research has it that materialistic values are related to various potentially harmful consequences (i.e. less happiness, well-being etc.)

Of course, even if a nation could be considered to be driven by materialism one cannot escape but question whether all strive and goals towards material success is negative or unnecessary (Carver & Baird, 1998). There are several ways of conceptualizing materialism that tackles this problem. One way of conceptualizing materialism is to distinguish between relative materialism and survival materialism (James, 2008). This concept separates the strive for money or material acquisitions that is directly or indirectly connected to one’s survival or for its utility (e.g. a raise in order to provide groceries and other necessities) from the strive for material acquisitions for mere possession and consumption.

Poverty of course brings forth a certain type of materialism that is not malevolent to psychological well-being but rather helpful in order to establish a certain standard of living. On the other hand Relative materialism, simply put, is all materialistic aspirations and values that exceed one’s biological and psychological needs (James, 2008).
Future Research

This study's implication for future research is aimed at gender differences and culture. Several hypothesis was confirmed when gender differences were looked for. This gives reason to expand on the topic to find out why and how gender and culture impact materialistic aspirations and temporal orientation.

Longitudinal studies would further the understanding of the consequences of materialism. The negative side of materialism was observed largely in relation to the industrial revolution, and later studies have observed that as economies grow so too does materialistic values while general well-being decreases (e.g. Fromm, 1991; James, 2008). Longitudinal studies could thus bring further clarification on this phenomena where it to be conducted in a growing economy, while possibly also taking into account local cultural values and the role of socialization.

Finally, experiments would largely benefit research on materialism, future orientation and their influence in other domains. Some experiments have been done using management and economic games (James, 2008). Videogames could be beneficial for this type of research as well, using different types of games. For example, role playing games often offer the player choices that are akin to a short-term (finishes quest), low reward choice or a long-term (opens more quest objectives), higher reward. Such scenarios have both temporal- as well as materialistic elements involved. In high budget games the level of immersion increases further by design, making such choices personal and meaningful - even more when these choices affects other characters that one has formed a relation to in the game. What kind of choices do people make, and does it make a difference whether it is perceived as a personal choice, whether it affects other people. Experimental manipulations could be employed before playing this kind of game, by having participants read scenarios or finish a management game.

Conclusion

The findings in this study support the idea that future orientation relates to caring more for the environment, at least among men. Considering that majority of high positions (e.g. CEO, manager, politician etc.) are held by men (Forbes, 2016-05-26), one cannot but wonder whether organizations intentionally aims at employing and promoting people, mostly men, that are materialistic, short term oriented - valuing profit and recognition over the environment or other people (Western, 2013)?
Related to the daily life of people in organizational and work settings, temporal orientation could potentially have other important impacts that might easily be overlooked when focus is on specific elements of temporal orientation. In one sense organizations, especially expanding ones, should be interested in hiring people with a certain temporal preference depending on the goal of the operations and position in the organization. Organizations could restructure their operations by using workshops that demonstrates in a more immediate way the impact of short term planning, fostering Corporate social responsibility among their employees and managers.

A key concept in CSR practices is focusing on long term consequences of business operations, such as profit, environment and social. Tandon et. al., (2011) showed that managers that rate high on materialism were less prone to engage in practices akin to those proposed by corporate social responsibility, suggesting materialism could be an important factor. Possibly various management and resource games could be of use, where the theme is more related to organizational settings and more clearly depicts the potential social and ecological impacts that managerial decisions have.
References


Fromm, E. (1976 [2013]). *To have or to be?*. New York: Bloomsbury.


