Cultural differences in academic motivation goals: a meta-analysis across 13 societies

Sonja Dekker, New Zealand’s official statistics agency, New Zealand
Ronald Fischer, Victoria University of Wellington, New Zealand

ABSTRACT. A meta-analysis of academic motivation focused on the relations between students’ achievement goal orientations and societal values and human development indicators. The authors analyzed relevant studies using either Andrew Elliot and Marcy Church’s (1997) or Michael Middleton and Carol Midgley’s (1997) achievement goal instruments separating mastery, performance approach, and performance avoidance goals, with 36,985 students from 13 societies. Ecological correlation and regression analyses showed that mastery goals are higher in egalitarian societies, whereas performance approach goals are higher in more embedded contexts and in less developed societies. Performance avoidance goals did not strongly relate to societal-level variables. The findings show that achievement goals are rooted within dominant societal values.

KEYWORDS: Academic achievement motivation, Culture, Performance goals, Values

Achievement motivation is an essential element of everyday life. Individuals have to strive to be competent in their activities, regardless of whether they are in the classroom, at work, or in leisure and sports. Elliot formulated a hierarchical model of approach and avoidance motivation to explain the underlying dimensions of motivation goals (Elliot, 1999; Elliot, Church, 1997). Two different orientations are distinguished: Mastery motivation orientates individuals toward learning, being challenged, and developing their competence. Performance motivation orientates individuals toward demonstrating their competence, competing with others, and gaining favourable social judgments (Smith et al., 2002). This performance orientation can be further distinguished along an approach-avoidance dimension. Performance approach goals are focused on demonstrating ability, outdoing others, and attaining favourable social comparison judgments, whereas performance avoidance goals are focused on avoiding failure, inward self-judgment, and avoiding responsibilities.
Avoidance goals are concerned with avoiding failure and protecting oneself from looking stupid, being embarrassed, and being judged by others as lacking ability and competence. Therefore, the aim is to prevent unfavourable social comparison judgments (Smith, Duda et al., 2003; Elliot, Church, 1997). This trichotomous achievement goal framework has become popular in academic and sporting domains and has been widely used in the literature (Duda, Nicholls, 1992). However, to the date of this publication, little attention has been paid to cultural and societal factors influencing these three different types of achievement motivation. The continued increase in international students studying in Western societies makes a better understanding of cultural factors on motivational patterns essential. Educators need to understand the motivation structures of international students in increasingly diverse classrooms. Elliot discussed various antecedents of these goals and speculated about the importance of some contextual and cultural factors (Elliot, 1999).

In the present study, we use a meta-analytical framework to expand that discussion and propose and test hypotheses of societal-level antecedents of achievement motivation. We use a recent and well-validated model of societal-level values as a theoretical framework for our hypotheses, providing a link between value and achievement motivation research. Before presenting our theoretical arguments about societal differences, we introduce our value framework (Schwartz, 1994; 2004; 2006).

**Schwartz societal value framework**

Schwartz proposed a theory of value structure at the societal level (Schwartz, 1994). This structure emerges because of a number of basic issues that each society has to address in regulating human activity (Hofstede, 2001; Schwartz, 1994). There are different ways in which these basic problems can be approached, and societies are thought to differ along some basic dimensions. Schwartz argued that there are three main problems (Schwartz, 1994). The first problem is managing the relations between the individual and the group. Persons can be autonomous or they may feel embedded in their groups. In societies that value embeddedness, individuals are strongly connected to a larger collective, and meaning in life is primarily determined by social relationships. In these contexts, individuals are socialized to maintain and obey the status quo.
There is a strong emphasis on working hard to maintain the order and prestige of the group. In contrast, in autonomous contexts, individuals are expected to find meaning in their own personal uniqueness and are encouraged to express their own personal preferences, attitudes, and feelings. Individuals are free to pursue their own intellectual or experiential endeavours without strong interference or disapproval from others.

The second problem facing all societies is how people should manage their relations to the natural and social world. Therefore, the second dimension of societal variability focuses on the extent to which individuals seek to master and dominate the social and natural world or to what extent individuals try to preserve and accept a harmonious state of the world (Schwartz, 1994; 2004). Harmony is at one end of the continuum. Societies at this end of the continuum stress that individuals should fit into the world as it is, trying to understand and appreciate the world rather than changing, directing, or exploiting it. The opposite end of this dimension is mastery, which emphasizes self-assertion with the goal of mastering and changing the social and natural world to obtain desired individual or group outcomes.

The final problem discussed by Schwartz was how to encourage responsible behaviour that preserves the social fabric (Schwartz, 1994). Individuals must be motivated to consider the welfare of other people, coordinate actions with them, and manage unavoidable interdependencies. The dimension reflecting this problem is labelled hierarchy versus egalitarianism, capturing the extent to which individuals are socialized to comply with a hierarchical system of ascribed roles or whether individuals are seen as moral equals (Schwartz, 1994; 2004). In hierarchical contexts, individuals accept and expect an unequal distribution of power and resources, whereas in egalitarian settings individuals are socialized to take care of others and feel a strong commitment to the well-being of other human beings. At the hierarchical end of this dimension, people act in the interests of others because they have internalized hierarchically defined obligations and roles, whereas those at the egalitarian end act in a prosocial way as a matter of choice.

These three problems can be plotted in a two-dimensional space of mutual compatibilities and conflicts. For example, egalitarianism and autonomy are compatible and aligned next to each other because both stress that individuals should take responsibility for
their actions and base decisions on their personal understanding and interpretation of the situation. Embeddedness and hierarchy are related because both emphasize role fulfilment and obligations to the larger group that take precedence over the individual’s aspirations and desires.

These value dimensions can be measured in two different ways. The original Schwartz Value Survey (Schwartz, 1994) was completed by students and teachers from 41 cultural groups in 38 countries and included a list of 45 values that had been found to show similar meanings across a large number of societies (Schwartz, 1992). Each abstract value is briefly described in short parentheses, and participants are instructed to rate values in terms of their importance in their everyday life. The structure that emerged on the basis of the aggregated societal-level scores was stable (based on split-half analysis) and showed meaningful relations with other societal-level indicators (Schwartz, 1994). Since then, the structure has been confirmed across samples from 66 societies from all inhabited continents (Schwartz, 2004; 2006). More recently, Schwartz, Melech, Lehmann, Burgess, and Harris developed an indirect measure of value preferences, the Portrait Value Questionnaire (PVQ) (Schwartz et al., 2001; Schwartz, 2005). Respondents are presented with a short description of a person and his or her goals, aspirations, or wishes. One example is “Thinking up new ideas and being creative is important to her. She likes to do things in her own original way.” Individuals are instructed to rate how similar this person is to them. A shortened 21-item version was included as part of the European Social Survey (Schwartz, 2003) and administered in representative national samples in 20 countries. The societal-level structure was confirmed, and correlations between the original version and the PVQ averaged 0.63 (Schwartz, 2006). This is an acceptable similarity because these scores are measured with different instruments and formats, in different samples, and across a 15-year time lag. This model has emerged as one of the dominant frameworks in cross-cultural psychology (Smith, Bond, Kağıtçıbaşı, 2006). Therefore, we use this value framework to explain the achievement motivation across societies.
Achievement motivation framework across societies

The hierarchical achievement motivation framework describes the process of transforming broad motivational orientations (such as need for achievement, fear of failure) into cognitive goals and behavioural outcomes. The resulting achievement goals are cognitive representations of competence possibilities and relate to specific achievement-relevant behaviours and outcomes. It is these goals that direct individuals to successor failure. Need for achievement (McClelland et al., 1953) is thought to underlie both mastery and performance approach goals (such as attainment of positive possibilities). In contrast, fear of failure orients individuals to adopt performance avoidance goals (like avoidance of negative possibilities). Fear of failure is also related to performance-approach goals because individuals are motivated to avoid failure by strategically striving to demonstrate success. Hence, both mastery and performance avoidance goals are motivationally congruent forms of achievement regulation because both goal adoptions are aligned with a single motivation. In contrast, performance approach goals are more complex and are associated with a motivation to both socially demonstrate success and avoid failure.

There has been much research on the individual-level antecedents and correlates of these goals (Elliot, McGregor, 1999; 2001; McGregor, Elliot, 2002; Smith, Duda et al., 2002). Some of these studies have focused on family socialization and implicit theories (Elliot, McGregor, 2001). However, the larger societal socialization context in which these goals are adopted has not been examined. Elliot (Elliot, 1999) listed a number of potential antecedents and speculated that performance goals (both approach and avoidance) especially are related to self-based and relational variables (Bond, 1986; Markus et al., 1996). Economic factors (as availability of economic opportunities in a society) might also be important for selection of achievement goals (Maehr, Nicholls, 1980). A small number of studies have investigated the link between the culture-related values of individuals and the achievement goals at the individual level (Tanaka, Yamauchi, 2004; Urdan, 2004), but these findings have been inconclusive. Therefore, in the present study we adopt a theory-driven approach at the larger societal level.

Societal cultures have been found to systematically vary in the extent to which individuals are autonomous or firmly embedded in
groups (Schwartz, 1994; 2004). In embedded societies, individuals are socialized to conform to group norms and duties, meaning is derived through social relationships, and individuals work hard to maintain and raise the prestige of the group. In autonomous societies, at the other end of this continuum, people are free to express their own personal preferences, opinions, and feelings and to emphasize their individual uniqueness. Performance orientation is socially oriented, and individuals are motivated to show success or avoid failure, because of strong social pressure (such as approval in case of success, disapproval in case of failure). We could predict that in embedded contexts, individuals are expected to show high performance motivation and avoid failure as the poor performance of one individual will reflect negatively on the group (Tao, Hong, 2000). However, in autonomous settings, individuals are free to pursue their own interests and are not subjected to the same social pressures to perform well. Therefore, performance goals are expected to be higher in embedded contexts and lower in autonomous contexts.

Hypothesis 1 (H1): Performance goals (approach and avoidance) will be higher in embedded societies and lower in autonomous societies.

Mastery goals are characterized by a strong interest in developing competence and task mastery. This will often involve multiple attempts to solve problems with a high risk of failure. Failures are critically analyzed and used for further developing one’s understanding of the problem. Therefore, normative pressures to always perform well would be counterproductive for developing strong mastery orientations. We predict that mastery goal orientation will be lower in embedded contexts and higher in autonomous contexts.

H2: Mastery goals will be higher in autonomous societies and lower in embedded societies.

The second dimension of cultural variability is the extent to which individuals seek to master and dominate the social and natural world versus desiring to preserve and accept a harmonious state of the world (Schwartz, 1994; 2004). As discussed earlier, in
mastery-oriented societies, people are expected to be competitive and ambitious and to exert social dominance over others and the environment. This value context should stimulate high performance approach goals because these goals are exemplars of mastery values.

$H_3$: Performance goals will be higher in mastery-oriented societies and lower in harmony-oriented societies.

We do not expect a correlation between mastery goal orientation and mastery values. Mastery values at the societal level emphasize demonstrating socially valued success and dominance over others, which is more likely to reflect strong extrinsic motivation. However, mastery achievement goal orientation focuses on achieving task mastery as an end in itself and therefore is more intrinsically oriented. Because of the different meanings of mastery values versus mastery achievement goal orientations, no hypothesis is put forward.

A final dimension of societal values is the extent to which individuals are socialized to comply with a hierarchical system of ascribed roles versus the extent to which individuals are seen as moral equals (Schwartz, 1994; 2004). In hierarchical societies, individuals are socialized into hierarchically structured roles, and it is expected of individuals to preserve and strengthen this order. In contrast, in egalitarian contexts, individuals are expected to care and show a strong concern for others as moral equals. On the basis of the same aforementioned principles, we could expect that hierarchy is associated with strong social pressures to perform well and to avoid failure. Mastery orientation is expected to be higher in egalitarian contexts where individuals are not constrained by role prescriptions and are free to pursue an error-prone and more experimental way of solving problems.

$H_4$: Performance goals will be higher in hierarchical societies and lower in egalitarian societies.

$H_5$: Mastery goals will be higher in societies emphasizing egalitarianism and lower in societies stressing hierarchy.

The larger socioeconomic context is also likely to influence the type of achievement goal that students endorse. For example,
Elliot speculated that lower socioeconomic status is related to performance avoidance goals (Elliot, 1999). Maehr and Nicholls reported some cross-cultural studies showing that economic opportunities have an impact on achievement motivation, suggesting that the societal level of human development might have a significant influence on the goals that individuals adopt in their life (Maehr, Nicholls, 1980). The United Nations Development Programme (UNDP, 2007) published a Human Development Index (HDI) that includes a broad range of well-being and life opportunity indicators beyond simple economic wealth. These include indicators of a healthy life, sufficient income, a decent standard of living, and access to education. We expect that individuals socialized in an environment where they have choices and lead a more prosperous life develop expectations that mastery and task orientation will pay off. Basic survival needs are met, and there are opportunities to gain higher education. This should stimulate a more task-oriented motivation, with individuals feeling free to tackle challenging tasks that may result in occasional failures. These failures will not negatively affect their social status or material and social well-being. Individuals in these contexts should develop a more positive approach to achievement situations, which in turn should lead to higher mastery orientation. In contrast, in less developed contexts, individuals will be inclined to adopt goals that show their competence and avoid failure. In these contexts, it is important to perform tasks according to social standards to gain sufficient resources for survival. There is little incentive for individuals to engage in time-consuming and potentially futile attempts to master difficult tasks. Therefore, performance approach and avoidance goals should be higher in less developed societies.

$H_r$: Higher human development will be associated with greater mastery goals and lower performance approach and avoidance goals.

In summary, we propose that societal values and the general level of a society’s development have a significant relationship with the achievement goals adopted by students within these nations. It is possible that other nation-level variables are also important (Elliot, 1999; for research on motivation in organizational settings, see also Fischer, Mansell, 2007; Wasti, Önder, in press). However, given
the limited nature of previous work and lack of reliable and valid indicators across a number of societies, at this stage we are limiting our focus to the testable hypotheses presented above.

Both Elliot and Church and Middleton and Midgley have constructed questionnaires to measure the adoption of the three achievement goals in the college classroom (Elliot, Church 1997; Middleton, Midgley 1997). Factor analyses confirmed a clear three-factorial model, and subsequent research has shown that these two instruments are highly interrelated (Smith et al., 2002). In the present study, we conducted a meta-analysis of means published in studies using either of these two instruments. The goal is to examine the relationship of achievement goals with societal-level dimensions of values and human development. Meta-analysis is a set of techniques that statistically combines the results of two or more independent studies to provide an overall answer to a question of interest (Everitt, Wykes, 1999). Any statistical information (such as values, frequencies, odds ratios, correlation coefficients, factor-loading matrices) reported in metrics that can be compared across studies can be meta-analyzed. Meta-analysis of means can provide useful information for detecting contextual effects (Lipsey, Wilson, 2001; for examples, see Fischer, Chalmers, 2008; Fischer, Mansell, 2007; Van Hemert et al., 2002) such as (a) whether means differ across populations and (b) whether these means covary in a meaningful manner with contextual variables.

Some studies (Fischer, Smith, 2003) have used more conventional forms of meta-analysis (such as analyses of group mean differences). In a cross-cultural context, such analyses are problematic for a number of reasons. First, only studies whose researchers explicitly compared two or more samples can be included in any analysis, severely limiting the use of available information. Second, the comparison standard is most commonly the United States (comparing samples from the United States with other samples from around the world). Studies using other samples cannot be readily compared. Last, meta-analyses using mean differences as effect size can only show whether there is a difference; assessing the magnitude of the difference and exploring its meaning become difficult. The data depend on the comparison samples chosen, and any information about context effects (such as cultural distance, economic development) is not included in the estimate and therefore cannot be directly tested (Fischer, Smith). These shortcomings
can be addressed by using the means directly, because this is the information of interest for this type of cross-cultural work.

**Method**

*Literature Search*

An electronic literature search was conducted using PsycINFO and the Social Science Citation Index (SSCI) for all articles that referenced Elliot and Church (Elliot, Church, 1997) or Middleton and Midgley (Middleton, Midgley, 1997). Although Midgley and colleagues had developed a version of their Patterns of Adaptive Learning Survey, it did not include the trichotomy approach-avoidance framework of achievement goals (Midgley et al., 1996). Therefore, the 1997 instrument was included in the present analyses (it was also more frequently used than previous versions). Smith et al. reported sufficient overlap between these two instruments for us to consider combining them in our analyses (Smith et al., 2002).

*Inclusion criteria*

There were three key inclusion criteria. First, the research must have measured achievement motivation goals using either of the two instruments. Studies that used a modified version of the scale (changing context such as referring to one’s class, using specific subjects like mathematics rather than general academic achievement goals) were also included. Second, the achievement goals had to relate to the participants’ personal academic motivation goals. If the instrument had been adapted to measure the perceived classroom motivational climate or to measure sporting or environment goals, the study was excluded. Third, sufficient statistical information (means, standard deviations, number of responses) had to be reported so that an effect size could be calculated. The article by Elliot and Church received 268 reference hits on PsycINFO and 227 on the SSCI (Elliot, Church, 1997). Middleton and Midgley’s article was located 158 times on PsycINFO and 142 on the SSCI (Middleton, Midgley, 1997). A large number of articles referenced both of these articles and were located in multiple databases. After excluding studies that did not meet our criteria, there were 24 studies reporting sufficient data for Elliot and Church’s instrument and 49 studies with sufficient data for Middleton and Midgley’s instrument. These studies were
primarily conducted in the United States (72%). Smaller numbers of samples came from Norway, Greece, Australia, Japan, South Korea, China, Finland, France, Israel, Canada, the United Kingdom, and Taiwan. The total sample sizes, number of samples, and means per society are reported in the Appendix. Overall, we included data from 36,783 students. On average, there were more female students (54.5%) than male students (45.5%).

Societal-level variables

We also used means of the societal values derived from Schwartz’s societal-level analyses (Schwartz, 1994). There are seven value domains that measure three main dimensions. We used these three bipolar societal-level dimensions for our analyses (egalitarianism vs. hierarchy; autonomy vs. embeddedness; harmony vs. mastery). Variation across the whole continuum was demonstrated for two of the three dimensions (see Appendix and Figure 4 in Schwartz, 2006). For egalitarianism versus hierarchy, Norway and Finland were located at the egalitarian end, whereas China, Taiwan, and South Korea were strongly hierarchical. Similarly, Norway, Finland, and France were at the harmony end of the harmony versus mastery continuum, whereas the United States, Israel, China, and South Korea were at the mastery end. However, for autonomy versus embeddedness our samples were somewhat restricted. France and the United Kingdom were at the autonomy end, whereas Taiwan, China, and South Korea were nearer to the embeddedness end. The three dimensions were considerably inter-correlated. The correlation between autonomy versus embeddedness and egalitarianism versus hierarchy was .66; that between autonomy versus embeddedness and harmony versus mastery was .64; and that between egalitarianism versus hierarchy and harmony versus mastery was .58. Therefore, our analysis needs to consider the unique variance associated with each dimension.

Last, we used the HDI, as reported by UNDP (UNDP, 2007), using the Hong Kong scores to represent Taiwan. The indicators for 1990, 1995, 2000, and 2004 were averaged, as these time points cover the time range of studies included in the analyses. The smallest correlation between these four time points across our 13 societies was .98, and the resulting Cronbach’s alpha was .99. Therefore, the four time points provided a highly reliable estimate of societal development. This combined score correlated at between -.56
(mastery) and .53 (affective autonomy) with our societal value orientations. The lowest levels of societal development were reported in China and South Korea, whereas the highest levels were reported in Norway.

**Meta-analytic procedures**

The arithmetic mean for each achievement goal was calculated as the effect size for the meta-analysis. Studies that reported sums were converted into means by dividing the sum by the number of reported items. All means were then standardized by dividing them using the response scale range (either 5- or 7-point scales), resulting in scores ranging between 0 and 1 by their response range. This type of standardization is necessary to obtain a comparable metric of effect sizes (means).

Two methods were used to test our hypotheses. First, all individual sample means were aggregated at the societal level. Then we correlated the resulting societal achievement goal means with societal-level values and HDI. Because the available data were from a limited number of societies, Spearman rank order correlations were used.

Second, we used a regression analysis at the study level (level of effect sizes). Initially, we disaggregated our societal-level variables (values, HDI) to the effect-size level. This means that each reported effect size (mean) was assigned the corresponding societal-level score for values and HDI (for an example of this approach, see Bond, Smith, 1996). We then conducted a sample-size-weighted regression analysis (Lipsey, Wilson, 2001), in which each effect size was weighted by the study sample size divided by the variance of the means (for justifications of using this approach, see Lipsey, Wilson; Rosenthal, 1991). Standard errors and significance levels are inaccurate, and we used the methods described by Lipsey and Wilson and followed a fixed-effects approach.

To adjust for instrument and sample differences, we used a number of dummy variables. First, we entered a dummy variable that specified the version of the questionnaire being used (that of either Middleton and Midgley, 1997, or Elliot and Church, 1997). Second, previous research has demonstrated that goal motivations change during adolescence (Midgley et al., 1995). Therefore, we used sample characteristics to adjust for potential developmental changes. Samples of children (number of studies; k = 57) were...
used as reference category and contrasted with secondary school students ($k= 25$), adolescents (who are similar to secondary school students, but studies were conducted outside school contexts; $k = 5$), and university students ($k = 56$). Therefore, the regression analysis adjusted for these potential confounds across samples.

**Results**

Approximately 28.6% of the variance in task orientation means, 40% of the variance in performance approach goals, and 45.45% of the variance for performance avoidance goals was between societies. Therefore, there was substantial variability in achievement motivation means across samples. To explain this variability, we conducted correlations at the societal level (see Table 1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mastery goals</th>
<th>Performance approach goals</th>
<th>Performance avoidance goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy versus embeddedness</td>
<td>.48</td>
<td>-.61*</td>
<td>-.16</td>
</tr>
<tr>
<td>Egalitarianism versus hierarchy</td>
<td>.70**</td>
<td>-.41</td>
<td>-.19</td>
</tr>
<tr>
<td>Harmony versus mastery</td>
<td>.27</td>
<td>-.71</td>
<td>-.19</td>
</tr>
<tr>
<td>HDI</td>
<td>.11</td>
<td>-.72**</td>
<td>-.14</td>
</tr>
</tbody>
</table>

Note. HDI = Human Development Index.

*p < .05, **p < .01.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mastery goals</th>
<th>Performance approach goals</th>
<th>Performance avoidance goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middleton &amp; Midgley, 2002</td>
<td>.56*</td>
<td>.20**</td>
<td>.68**</td>
</tr>
<tr>
<td>(vs. Elliot &amp; Church, 2002)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adolescents (vs. children)</td>
<td>-.08**</td>
<td>.02*</td>
<td>-.12**</td>
</tr>
<tr>
<td>Secondary school students</td>
<td>-.11*</td>
<td>-.00</td>
<td>-.12**</td>
</tr>
<tr>
<td>(vs. children)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University students (vs. children)</td>
<td>.10**</td>
<td>.23**</td>
<td>-.05*</td>
</tr>
<tr>
<td>Autonomy versus embeddedness</td>
<td>.04</td>
<td>-.04*</td>
<td>.12**</td>
</tr>
<tr>
<td>Egalitarianism versus hierarchy</td>
<td>.65**</td>
<td>.28**</td>
<td>.10**</td>
</tr>
<tr>
<td>Harmony versus hierarchy</td>
<td>-.41**</td>
<td>-.47**</td>
<td>-.40**</td>
</tr>
<tr>
<td>Human development indicator</td>
<td>-.44**</td>
<td>-.46**</td>
<td>-.18**</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.58</td>
<td>.30</td>
<td>.54</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01.
First, we found higher embeddedness to be associated with greater performance approach goals, but not with performance avoidance goals. We did not find significant correlation between mastery goals and autonomy values (although the correlation was in the predicted direction; $p = .12$). We observed a significant correlation between performance approach goals and mastery values. The correlation with performance avoidance goals was in the predicted direction but not significant. Similarly, we did not find significant correlations between performance goals and hierarchy (but the correlations were again in the hypothesized direction). Mastery goals were significantly higher in more egalitarian societies. Last, lower human development was associated with higher performance approach goals (but the effects for performance avoidance and mastery goals were not significant). Overall, it is also noteworthy that it was predominantly performance approach goals that showed significant correlations with societal-level variables. To test our hypotheses more rigorously, we conducted a sample-size-weighted regression analysis. The results are reported in Table 2. As can be seen there, the findings are often congruent with the previous analysis, but we also observed diverging findings from the societal-level correlation analysis. A significant effect of autonomy versus embeddedness values on performance approach goals was found, supporting $H_1$. We also found a significant effect on performance avoidance goals, which was in line with our hypotheses. We found a strong and consistent effect between egalitarianism and mastery goals. Greater egalitarianism was associated with higher mastery goal levels, supporting $H_5$. Greater human development was associated with lower performance approach goals and lower performance avoidance goals. This supports $H_6$. 

Turning to some unexpected findings, we did not specify a hypothesis for mastery goals and mastery versus harmony values. However, we found that greater mastery was associated with greater mastery goals when adjusting for the other societal-level variables and sample and instrument characteristics. When adjusting for other societal-level variables, both performance approach and performance avoidance goals were associated with higher egalitarian values. This contradicts our correlational analyses at the societal level. The simple correlations at the effect size level indicated that suppressor effects are operating. When we included the other societal-level indicators (especially
autonomy-embeddedness, which is relatively highly correlated with egalitarianism-hierarchy, $r = .66$), the regression coefficients changed direction. We also found a negative effect of the HDI for mastery goals, again suggesting some suppression effects. A comparison with the zero-order correlation matrix shows that once the effects of other societal-level effects were controlled, the relationship between HDI and mastery goals became negative.

Last, it is interesting to note that the Middleton and Midgley (Middleton, Midgley, 1997) scale showed higher means, on average, than the Elliot and Church scale (Elliot, Church, 1997). Concerning sample effects, studies of adolescents and high school students consistently show lower mastery goal and performance avoidance goal means than studies of children. However, university students tend to endorse higher mastery and performance approach goals and lower performance avoidance goals. With a different type of dummy coding (combining adolescents and high school students and then setting up a linear contrast comparing children, adolescents or high school students, and university students directly), results showed that mastery goals and performance approach goals significantly increase and performance avoidance goals significantly decrease from samples of children to samples of university students.

**Discussion**

The present study is the first to systematically examine the relationship between values and socioeconomic variables with achievement goals across a large number of societies. We postulated a theoretical framework of value influences on achievement motives. In line with our predictions, we found that the societal context exerts a systematic and moderately strong effect on the adoption of achievement goals, highlighting that achievement goals are grounded within a societal context. In the following discussion, we focus primarily on the consistent effects across the two analyses.

Performance approach goals showed the largest number of significant relations at the societal level. In the regression analyses, the significant links with embeddedness (vs. autonomy) and human development were confirmed. In highly embedded societies, individuals are concerned with gaining social approval by showing competence and abilities. Performance approach goals were higher in these contexts compared with more autonomous societies. In
autonomous contexts, individuals are more likely to pursue their own goals without paying as much attention to social approval of success. This is in line with previous observations (e.g., Bond, 1986), and the present study provides supporting evidence across a larger number of samples. Similarly, in less developed societies, individuals are motivated to demonstrate success, presumably to gain material resources for living. It should be noted that societies in our sample were all in the highest development bracket, and stronger effects might be expected across a wider range of societies or living conditions (Maehr, Nicholls, 1980). This restriction in variability is a clear limitation of the present analysis.

We also found some strong and consistent relations between (a) egalitarianism versus hierarchy and (b) mastery goals. In more egalitarian contexts, individuals are more focused on learning and mastering difficult tasks, and people enjoy challenges. Self-determination theory makes similar predictions (Ryan, Deci, 2001). More egalitarian contexts in which individuals are free to pursue their own goals are conducive to the development of mastery goals. Therefore, we identified two societal value contexts in which different academic goals are associated with high achievement motivation. In societies in which people are closely connected to their social groups (embeddedness), individuals show high achievement motivation because of a desire to show competence and gain social approval. In contrast, in egalitarian contexts, adolescents and students show high achievement motivation due to a desire to master challenging tasks and learning. These two dimensions are inversely related: high embeddedness is typically associated with greater hierarchy (Schwartz, 1994; 2004). Therefore, the two societal dimensions exert incongruent motivational forces on students.

This situation may also explain the unexpected findings for performance approach goals. Using societal-level correlations, societal values of embeddedness were associated with higher performance approach goals, and hierarchy was marginally associated with high performance goals, whereas in the regression analysis, egalitarianism showed a weak but significant relationship with goal orientation. Controlling for the mutual dependence of these two dimensions, we found that the unique influence of egalitarian values is an apparent elevation of performance approach goals. With the hierarchical differentiation being constant, egalitarianism might still
be associated with a desire to perform well. Egalitarian values are associated with both mastery and performance approach goals, indicating a strong achievement orientation. Overall, this shows the complex and sometimes contradictory nature of societal values. It also implies that researchers interested in effects of cultural values do need to measure competing value orientations to gain a clearer understanding of the unique effects of value dimensions (for further illustrations of such effects, see also Fischer, Smith, 2003).

Last, performance avoidance goals are not strongly associated with societal values. In the correlational analysis, none of the correlations were larger than .20. In the regression, some of these effects became significant and explained a substantial amount of variance. Two of these effects were in the direction of our hypotheses (harmony vs. mastery, human development), whereas two (autonomy vs. embeddedness, egalitarianism vs. hierarchy) were contrary to our predictions. However, these effects were rather small, and given the relatively small number of societies in our analyses, we abstain from speculations about the meaning of these effects. Avoidance tendencies might be more strongly related to individual difference variables such as anxiety (Elliot, McGregor, 1999), fear of failure (Elliot, McGregor, 2001), or neurophysiological predispositions (Elliot, 1999). It may also be possible that societal context and individual differences interact (e.g., anxious individuals in highly threatening situations adopt avoidance goals). Clearly, more focused future research is needed to disentangle the effects of societal values on performance avoidance goals.

Limitations

There are several limitations to the present study. First, few studies have been conducted outside the United States. Consequently, our analysis is limited by this lack of previous research. However, we hope that we have highlighted that societal-level factors have a significant effect on academic motivation goals and that our results will stimulate further research. With the globalization of education (e.g., international students in Western and English-speaking societies), it is necessary to understand the students’ motivational structure.

Second, previous research has shown that the endorsement of particular achievement goals changes as a student progresses through the educational system. The present study included diverse samples
ranging from elementary school children to university students, and we tried to account for this diversity in our analyses. Indeed, we found systematic effects on performance goals in line with previous studies (Midgley et al., 1995). However, information on the actual age range of participants in these studies was often missing, so it was difficult to control for age effects more directly. Future analyses should investigate and control for this developmental factor. We also urge primary researchers to report correlations between age (and educational status) and academic goals in their studies, to enable more detailed investigation in future meta-analyses.

Furthermore, we have some concern about the level of construct equivalence across the instruments and samples that we used in our analysis. Concerning instrument effects, Midgley et al. stated that they excluded statements that measure correlates of goals such as fears, anxieties, and concerns (Midgley et al., 1998). Those researchers instead claimed to measure the reasons for specific academic behaviour (e.g., attempts to avoid looking dumb). However, Elliot and Church included items that (explicitly) address fears and worries, especially in their performance approach goal measure (Elliot, Church, 1997). Our regression analysis showed that these measures showed significant mean differences across samples. These differences were largest for the performance avoidance goals that appear most different between the measures. Nevertheless, holding mean differences constant, societal-level effects still emerged.

This circumstance leads to the question of the validity of the instruments in a cross-cultural context. We have no information about the equivalence of the instruments in the individual studies. This omission is a significant limitation. A number of different biases can be distinguished. For example, one issue is the quality of the translation of the instruments that were used. Translation bias is often treated as a random bias. Therefore, translation issues will lead to larger error components at the nation level, which then make significant correlations with other nation-level variables less likely (Fontaine, 2008; Schmitt et al., 2007). Because we found significant correlations for two of our three types of goals, this situation might be less of an issue. However, other forms of equivalence (functional, structural, metric, and full score equivalence; see Fontaine, 2005; Van de Vijver, Fischer, in press; Van de Vijver, Leung, 1997) cannot be ruled
out. Differential factor structures, acquiescence, norms of self-presentation, or social desirability can have an effect and need to be controlled in empirical research. The current lack of information on equivalence is worrying, and greater efforts must be made to test whether achievement goal instruments can be used in cross-cultural contexts. This issue is particularly serious for performance goals because it is currently unclear whether the construct of performance avoidance goals in general and the two instruments used in our analysis more specifically are culturally appropriate for comparisons across cultures. For example, performance avoidance goal items asking about reasons for not speaking up or asking questions in the classroom might not be appropriate if this behaviour is not typical in classrooms in specific cultures. Future researchers should investigate the cultural appropriateness of these scales, especially concerning performance avoidance goal items.

Implications for educators

The present study provided first evidence that societal values and the socioeconomic level of the society are systematically linked to academic achievement goals across a moderate number of societies. This study supports Tanaka and Yamauchi’s argument that achievement goals are rooted within the culture and that the cultural context needs to be given more consideration in academic motivation research (Tanaka, Yamauchi, 2004). Migration has led to an increasing diversity in the classroom, and educators need to deal with this change. A second issue is the adoption and use of foreign textbooks and educational material in non-Western settings. The present study outlines the effects of societal contexts because they lead to different and complementary achievement orientations. These findings can be applied in the classroom to help teachers understand their students’ academic motivations and behaviours and to assist them in learning how to motivate their students in culturally relevant ways. Mastery and performance approach goal orientations are both valid and successful strategies, but they use different processes. Mastery goals were generally highest in our samples (with the exceptions of South Korea and China). Therefore, using strategies fostering intrinsic motivation and a deep engagement with problems appears to be a useful approach, relatively irrespective of societal background. However, the relative emphasis of this orientation vis-à-vis
performance approach goal orientations needs to be considered. In most Western societies, characterized by mainly egalitarian and autonomous values, mastery goals are relatively more important than the other goals, whereas the majority of the world additionally shows considerable orientation toward performing according to social expectations (i.e., performance approach goals). These goal orientations can be conflicting in praxis. For example, when setting social expectations through competitions, mastery goal orientation might decrease. Alternatively, stressing that mistakes are tolerated and encouraging students to experiment to foster mastery orientation may be confusing for students with higher performance approach goals, because of the lack of standards imposed. Therefore, educators in culturally mixed classrooms need to balance these two motivations and provide opportunities for students to use both forms of goal orientation.

The use of student material from Western contexts in non-Western contexts also needs to be evaluated. In addition to providing examples that might not be relevant in the specific context, the design of the material (e.g., presentation of learning material) might not be organized in the most effective way. For example, university textbooks in a European tradition often focus on enhancing intrinsic motivation by providing stimulation and thought (e.g., reporting controversial and conflicting research findings when discussing major paradigms) or presenting large sections of additional material. This focus might be confusing in contexts where students are more strongly motivated to perform well. Provision of take-home messages, review questions, test sections, and answers (which are already increasingly used in textbooks) might be beneficial. Clearly, more research on these issues is needed. We hope that the present study stimulates researchers to further explore this important area in contemporary educational settings.

**Acknowledgments**

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## Appendix

List of Country Means and Sample Sizes

<table>
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<tr>
<th></th>
<th>Mastery Goals</th>
<th>Performance Approach Goals</th>
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<tbody>
<tr>
<td></td>
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<td>K</td>
</tr>
<tr>
<td>Australia</td>
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<tr>
<td>China</td>
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<td>2</td>
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<tr>
<td>Finland</td>
<td>344</td>
<td>2</td>
</tr>
<tr>
<td>France</td>
<td>559</td>
<td>2</td>
</tr>
<tr>
<td>Greece</td>
<td>149</td>
<td>2</td>
</tr>
<tr>
<td>Israel</td>
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</tr>
<tr>
<td>Japan</td>
<td>593</td>
<td>3</td>
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<tr>
<td>Korea, South</td>
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<th>Performance Avoidance Goals</th>
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<tr>
<td>United States</td>
<td>16321</td>
</tr>
</tbody>
</table>

Note. AUT - autonomy; EG - egalitarianism; HAR - harmony; HDI - Human Development Index.
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La motivazione che spinge gli individui alla definizione e al raggiungimento dei propri obiettivi costituisce un fattore di grande rilevanza per l'educatore. L'analisi statistica dei dati raccolti nei più recenti studi di settore, su quasi 40 mila studenti di 13 diverse società culturali, permette di verificare alcune ipotesi in merito alla relazione tra motivazioni e valori socialmente accettati e porta a concludere che gli individui tendono ad agire in base ad obiettivi personali per lo più inseriti in un sistema di valori sociali prevalenti che differenziano, quindi, l'approccio all'apprendimento di studenti di provenienza diverse. La crescente presenza di studenti di nazionalità e origini differenti, iscritti agli stessi corsi accademici, fa emergere l'esigenza di capire in che modo le motivazioni siano radicate nella struttura valoriale sociale e, quindi, variabili a seconda della provenienza degli studenti. Una tale differenziazione risulta inoltre interessante per la realizzazione di materiali e supporti didattici in grado di stimolare la motivazione individuale in base al contesto sociale.

Si tratta, tuttavia, di un settore di analisi ancora in fase evolutiva e una completa chiarificazione di tali dinamiche richiederebbe ulteriori ricerche, dato che la maggior parte degli studi disponibili si incentrano sulla situazione nei soli paesi occidentali e sul confronto tra Stati Uniti e resto del mondo.

In base agli studi più recenti la motivazione si orienta, dunque, secondo due direttrici generali: Mastery motivation (verso l'apprendimento, la sfida e la crescita personale) e Performance motivation (verso la competenza, la competizione e l'affermazione sociale). Quest'ultimo orientamento si distingue poi in performance approach (più attivo) e performance avoidance (orientato soprattutto ad evitare il fallimento e il giudizio negativo). Tutti questi elementi concorrono a costituire il complesso motivazionale che sostiene gli individui nel raggiungimento dei propri obiettivi e presenta, al contempo, aspetti di natura spiccatamente sociale.

L'approfondimento dell'analisi richiede, quindi, l'ulteriore distinzione, in base alle teorie di Schwartz (1994, 2004, 2006) di tre coppie di concetti operanti a livello sociale: egualitarismo vs. gerarchia; autonomia vs. partecipazione (incapsulamento) e armonia vs. dominanza. Queste tre duplici prospettive vanno a costituire il complesso motivazionale che sostiene gli individui nel raggiungimento dei propri obiettivi e presenta, al contempo, aspetti di natura spiccatamente sociale.

Gli obiettivi legati alla performance, invece, sono più forti in società a forte legame sociale che in quelle in cui prevale l'autonomia, in cui è maggiore la spinta al Mastery, ovvero alla dominanza sull'ambiente e sulla natura. Gli stessi obiettivi Mastery sono, inoltre, risultati più diffusi in società di tipo egalitario piuttosto che in quelle di
tipo gerarchico in cui, al contrario, è maggiore la spinta alla corretta realizzazione
dei compiti assegnati e all’evitare il fallimento. Società in cui prevale l’autonomia
e l’egualitarismo, complessivamente, permettono all’individuo di sostenere un
livello maggiore di rischio di fallimento, poiché è minore la necessità di essere
socialmente approvati e, per lo stesso motivo, sono più orientate alla dominanza che
all’armonia.