

**Economics Education and Value Change: The Role of Program
Normative Homogeneity and Peer Influence**

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ABSTRACT

In the light of corporate scandals and the recent financial crisis, there has been an increased interest in the impact of business education on the value orientations of graduates. Yet our understanding of how students' values change during their time at business school is limited. In this study we investigate the effects of variations in the normative orientations of economics programs. We argue that interaction among economics students constitutes a key mechanism of value socialization, the effects of which are likely to vary across more or less normatively homogeneous economics programs. In normatively homogeneous programs, students are particularly likely to adopt economics values as a result of peer interaction. We specifically explore changes in power, hedonism, and self-direction values in a two-year longitudinal study of economics students (N=197) in a normatively homogeneous and two normatively heterogeneous economics programs. As expected, for students in a normatively homogeneous economics program, interaction with peers was linked with an increase in power and hedonism values, and a decrease in self-direction values. Our findings highlight the interplay between program normative homogeneity and peer interaction as an important factor in value socialization during economics education and have important practical implications for business school leaders.

Keywords: economics education; management education; value change; peer influence; academic socialization; value socialization; normative impact of education; homo economicus

INTRODUCTION

The recent global financial crisis and corporate accounting scandals (e.g., Enron, WorldCom, Parmalat) have triggered a decline in public confidence in the moral character of the leadership of economic institutions and have drawn attention to how economics education in business schools influences the values of students, and thus of future business leaders (Ghoshal, 2005). Management scholars have observed that business school education is becoming increasingly homogeneous, almost universally emphasizing the principles and values of economics, such as the maximization of self-interest (Ferraro, Pfeffer, & Sutton, 2005; Henisz, 2011). Consequently, they have become concerned with understanding the impact of the homogenization of economics education on student values (Starkey & Tempest, 2009; Wright, 2010; Wang et al., 2011). Recognizing the unintended consequences of this homogenization, diversification of the curriculum has often been suggested as a way to minimize the impact of economics principles and to facilitate integrative reflection. Scholars highlight the importance of the inclusion of ethics-related classes in the curriculum (Evans et al., 2006; Rutherford et al., 2012), the integration of sociological and political science approaches towards the public good (Giacalone & Thompson, 2006), and the provision of institutional mechanisms that facilitate value awareness of students (Moosmayer, 2002). However, the arguments against the homogenization of economics education have been primarily theoretical, and little empirical research has investigated the effects of more or less diversified curricula on student value change. In this paper we address this gap and investigate value change in economics students at business schools that differ in the extent of their homogenization in accordance with the values of economics.

Further, while to date a number of studies have examined the impact of economics education on student values, goals, and behaviors (Marwell & Ames, 1981; Carter & Irons, 1991; Yezer, Goldfarb & Poppen, 1996; Kasser & Ahuvia, 2002; Gandal, Roccas, Sagiv, &

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Wrzesniewsky, 2005; Frank & Schulze, 2000; Frey & Meier, 2005; Wang, Malhotra, & Murnighan, 2011), very little is known about the mechanisms through which this value socialization takes place. We focus on interaction with study peers as a key mechanism of the socialization of academic values in higher education (Parsons & Platt, 1973; Weidman, 1989; Pascarella & Terenzini, 2005). Since economics values emphasize instrumentally rational interaction between individuals (Ferraro et al., 2005; Ghoshal, 2005), interaction with study peers is likely to be a particularly important mechanism in the socialization of these values (Weber, 1978; Parsons, 1967). However, the impact of interactions between economics students on their value change has surprisingly not yet been investigated in prior research.

Importantly, we argue that interaction with study peers is only associated with value change when it occurs in normatively homogeneous economics programs (Weidman, 1989; Miller, 1996). This is because in normatively homogeneous economics programs students can experience particularly strong pressure to internalize economics values, as they are unlikely to encounter academic perspectives that contradict these values (Giacalone & Thompson, 2006) and facilitate reflection on these values (Ghoshal, 2005; Ferraro et al., 2005). In normatively heterogeneous programs on the other hand, interaction with peers is unlikely to act as a mechanism for value change. Our findings suggest that policy makers in business schools may prevent the internalization of economics values by designing normatively heterogeneous academic programs that expose students to the assumptions of diverse theoretical perspectives and scientific fields of inquiry.

Below, we first review previous research on the effects of economics education on value change. We then discuss peer interaction as a key mechanism for value transfer which can provide insights into why values are likely to change more strongly in normatively homogeneous economics programs. Finally, we discuss values that are particularly likely to be influenced by economics education.

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ECONOMICS EDUCATION AND VALUE CHANGE

Human values are enduring, trans-situational normative standards about the desirable that have properties of oughtness and that serve as guiding principles in human life (Kluckhohn, 1951; Rokeach, 1973; Schwartz, 1992). Values shape the replication of internalized patterns of action across various contexts (Meglino & Ravlin, 1998; Hitlin & Piliavin, 2004; Bourne & Jenkins, 2013). In university departments, values serve as generalized normative standards that shape the assumptions of scientific inquiry (Weber, 1949; Blaug, 1992), and the development of academic vision, policies, curriculum, and teaching methods (Parsons & Platt, 1973; Smart, Feldman, & Ethington, 2000; Pascarella & Terenzini, 2005). Academic values enable university departments to integrate student activities around shared learning goals (Weidman, 1989; Moosmayer, 2012). Academic values are socialized during student involvement in curricular and social experiences in university departments (Weidman, 1989; Pascarella & Terenzini, 2005).

Studies typically link student involvement in economics education with the socialization of self-interest oriented values and behaviors. Economics education has been linked to a higher concern with power (Kasser, Cohn, Kanner, & Ryan, 2007) and hedonism (Gandal et al., 2005). Research shows that economics majors exhibit a lower concern with self-actualization (Kasser & Ahuvia, 2002) and pro-social goals (Frank et al., 1993; Franks, Falk, & Hinton, 1973), and a higher concern with greed (Wang et al., 2011) and financial success (Kasser & Ahuvia, 2002). Other studies similarly find economics majors to be more concerned with profit and self-interest than non-economics majors (Marwell & Ames, 1981; Kahneman, Knetsch, & Thaler, 1986; Carter & Irons, 1991; Yezer et al., 1996; Frank & Schulze, 2000; Gandal et al., 2005; Frey & Meier, 2005; Rubinstein, 2006). Although a number of studies attribute socialization of self-interest oriented values to student self-selection into economics education (e.g., Frank & Schulze, 2000; Gandal et al., 2005),

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previous research also suggests that economics education alone may affect student values (e.g., Wang, Malhotra, Murnighan, 2011).

Further, despite an increased concern with the normative impact of the homogenization of business school education in accordance with economics values (e.g., Ghoshal, 2005; Giacalone & Thompson, 2006; Henisz, 2011), little is known about the effects of variations in the normative orientations of economics programs. What little research there is has provided preliminary support for the idea that students are more likely to adopt economics values when they are exposed to normatively homogeneous education programs emphasizing these values. Specifically, Frank, Gilovich, and Regan (1993) found that Cornell University economics students who took a microeconomics class that was more homogeneously structured by economics values (i.e., more aligned with the principles of game theory and industrial organization) experienced a stronger increase in self-interest than students in a microeconomics class that was less structured by these values.¹ While this study has focused on the effects of an individual class, it provides some preliminary support for the need for a more fine-grained understanding of student value change in economics programs that are homogeneously guided by economics values.

We argue that our understanding of the effects of the normative orientation of economics programs can be enhanced by focusing on the mechanisms of value socialization during economics education. In the present paper, we explore the effect of interaction among economics students as a key mechanism of value socialization, the effects of which are likely vary across more or less normatively homogeneous economics programs.

Impact of study peers on value socialization

Values are primarily socialized during interpersonal interaction (Parsons, 1967; Weber, 1978; Rice, 2001; Bengtson & Black, 1973). In higher education, interaction with study peers is an important mechanism of the transmission and internalization of academic

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values (Newcomb, 1966; Parsons & Platt, 1973; Lacy, 1978; Weidman, 1989; Pascarella & Terenzini, 2005). While interaction with study peers plays a critical role in students' cognitive development (Pascarella, 1985), it is particularly important in the socialization of the values of academic major fields (Weidman, 1989).

Study peers serve as a reference group for the evaluation, interpretation, and socialization of academic values (Clark & Trow, 1966; Kelley, 1952). They provide students with a frame of reference for the ordering of their values as well as a source of approval, performance, and social feedback (Girves & Wemmerus, 1988; Greller, 1980; Milem, 1998). Students compare their values with the value expectations of their peers who embrace the academic values to which they aspire (Newcomb, 1966). Through interactions with study peers students develop consensual and shared sets of expectations concerning the values of an academic discipline and the relevance of these values for their career (Antonio, 2004).

Support for the notion that social interactions play a critical role in the adjustment to the values and norms of new contexts also comes from research on organizational newcomer socialization (Feldman, 1981; Morrison, 2002; Reichers, 1987). Reichers (1981: 278), for example, highlighted that social interactions constitute the "primary vehicle" of (initial) socialization in organizations. Social interactions provide information on the views and attitudes that are rewarded in a new context (Morrison, 1993), and allow newcomers to make sense of, and adjust to, organizational values (Reichers, 1981).

Importantly, it is interaction with study peers rather than with faculty members that is particularly likely to contribute to student value change. Faculty members are often formally required to expose students to academic values. However, much of the socialization of academic values takes place during interpersonal experiences with study peers (Newcomb, 1966). In their review of empirical research on higher education outcomes, Pascarella and

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Terenzini (2005) conclude that interaction with study peers exerts a stronger influence on the internalization of academic values than exposure to the curriculum or to faculty members.

Interaction with peers is likely to be particularly important in the socialization of economics values (Parsons, 1967; Weber, 1978). Economics emphasizes a concern with power, social comparison, and approval (Smith, 1759/2002; Srivastava, Locke, & Bortol, 2001; Kasser et al 2007). Economics values are primarily adopted because they are approved of by peers and esteemed for their instrumental significance in relation to others (Kasser, 2002). Individuals guided by economics values seek approval of others because it is instrumentally useful in maximizing their power in exchange relationships (Tonnie, 1996; Weber, 1978).

The importance of peer interaction in the enforcement of economics values is further supported by research on self-interest by Miller and colleagues (Miller, 1999; Miller & Ratner, 1998; Ratner & Miller, 2001). Miller (1999: 1055) argues that economics values which place normative emphasis on the pursuit of self-interest are likely to be internalized when individuals are exposed to “repeated instruction [...] on the power of self-interest”, which is then reinforced in social interactions. His research suggests that individuals are inclined to internalize economics values when they expect commitment to these values from others primarily for two reasons. First, individuals interacting with others whom they perceive as self-interested may worry about being taken advantage of (Miller, 1999). They therefore choose to act in a self-interested way themselves. This assumption has been widely supported by research on bargaining game experiments that suggest that the more individuals expect others to act in economically rational ways and pursue their own self-interest, the more they adopt economically rational strategies themselves (Kelley & Stahelski, 1970; Bouas & Komorita, 1996; Liberman, Samuels, & Ross, 2003; Kay, Wheeler, Bargh, & Ross, 2004; Molinsky, Grant & Margolis, 2012). Second, people pursue economics values

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emphasizing self-interest in interaction with others who embrace these values because of a fear that doing otherwise would lead to “a waste of time and effort” (Miller, 1999: 1056). Individuals may be inclined to avoid economically irrational actions (e.g., contributing to a public cause or good) when such actions are not shared by others because of their belief that any such action of theirs is likely to be self-contained, unreciprocated, and ineffectual, and thus is likely to result in the waste of their efforts and time (Miller & Ratner, 1998). Therefore, people who interact with economically rational individuals can be disinclined to pursue actions that are incongruent with economics values.

In summary, while there is little previous research on interaction with study peers in economics programs, there is strong theoretical support for the idea that it constitutes a key mechanism for the transfer of economics values. As we argue next, the impact of peer interaction will play out differently depending on how normatively homogenous an economics program is.

Impact of study peers and program normative homogeneity

The impact of study peers on value socialization is likely to vary across more or less normatively homogeneous economics programs. In particular, in an academic program that is homogeneously structured in accordance with economics values students are more likely to adjust their personal values to the normative demands and expectations of the academic environment during their interactions with peers (Weidman, 1989). This is because students' thoughts and values are likely to be shaped by their perceptions of what others believe (Moscovici, 1980). In normatively homogeneous programs students are exposed to few normative alternatives as part of the curriculum, providing a limited set of perspectives to draw on in their interactions. They are less exposed to classes that are not embedded in econometric methods or the assumptions of homo economicus in general, and less exposed to students and teachers from other social sciences and humanities (Colander, 2001; Giacalone

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& Thompson, 2006). Therefore, in homogenous programs economics students are less likely to encounter normative perspectives that challenge economics values (Bennis & O'Toole, 2005; Starkey & Tempest, 2009; Wright, 2010).

Consequently, in normatively homogenous economics programs students' peers are likely to appear to be a relatively uniform group, providing students with a "biased sample of the social world" (Kitts, 2003: 225). Students are unlikely to recall instances where the values of economics have been challenged in social interactions and thus overestimate their prevalence (Marks & Miller, 1987; Ross, Greene, & House, 1977; Tversky & Kahneman, 1973). This creates the impression of a "false consensus" regarding the "typical" values endorsed by students' peers (Wang et al., 2011). Individuals who perceive high levels of consensus regarding a set of values are in turn more likely to conform to these values (Zou, Tam, Morris, Lee, Lau, & Chiu, 2009).

In addition, in academic programs that are homogenized in accordance with economics values students may experience significant penalties for deviation from these values (Miller, 1999). In such programs students are likely to experience strong normative pressure to adopt economically rational strategies during their interactions because these programs are likely to place stronger emphasis on these strategies, and on student responsiveness to external demands (Weber, 1978; Riesman, Glazer, & Denny, 1970; White, 1957).

In contrast, in economics programs that are normatively heterogeneous students are likely to be exposed to a more diverse set of normative perspectives and therefore more likely to develop awareness of the consequences of economics values for individuals and society (Giacalone & Thompson, 2006; Ghoshal, 2005; Ferraro et al., 2005). In addition to their interactions with peers, they will encounter alternative perspectives that challenge the values of economics. Interactions with peers will be characterized by a greater diversity of

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normative views. A “false consensus” (Marks & Miller, 1987; Ross, Greene, & House, 1977) regarding the universal endorsement of economics values is less likely to emerge. In heterogeneous programs students are thus less likely to internalize economics values as a result of their interactions with study peers.

Values affected by economics education: Power, hedonism, and self-direction

We focus on three specific values which we argue are particularly likely to be affected by economics education. First, values of economics emphasize the maximization of power. Economics is underpinned by the values of the instrumentally rational action of the economically rational individual (*homo economicus*) (Mill, 1967; Hollis & Nell, 1975; Blaug, 1992). The efficiency of the instrumentally rational action that is guided by the utilization of the most efficient means to an end necessarily depends on individuals’ power to command means that are useful in the attainment of a given end (Weber, 1978). Individuals who act in an economically rational way in interactions with others seek to exercise power over them by using them as means to an end. For example, these individuals are likely to become involved in contractual relationships with those who are most useful and responsive to them. Further, for economically rational individuals the attainment of a given end, using the most efficient means, also serves as means towards further ends (Weber, 1978; Mill, 1967). For example, they may use wealth accumulated in prior profit maximizing ventures to generate further wealth by investing it in new ventures. Research suggests that individuals guided by economically rational action seek power by maximizing wealth (Mill, 1967; Lewin, 1996; Kay, Wheeler, Bargh, & Ross, 2005; Wang et al., 2011) and reputation (Smith, 1759/2002; Kasser, 2002; Liberman, Samuels & Ross, 2004) at the expense of egalitarian and expressive pursuits (Kasser et al., 2007; Molinsky, Grant & Margolis, 2012; Wang & Murnighan, 2011).

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Second, economics also emphasizes the pursuit of hedonism.² Economically rational individuals seek to derive hedonistic satisfaction from the utilization of the means that are instrumental in the attainment of a given end. Individuals who act in an economically rational way seek to derive satisfaction from using various 'economic goods', such as products, services, and people (Drakopoulos, 1991; Lewin, 1996). In human interactions, these individuals seek to derive satisfaction both from instrumentally using others and from being used by others (Weber, 1978). For example, in organizations these individuals may derive satisfaction from using their peers to increase their personal work performance or from maximizing their personal performance by being useful to their peers.

Third, the internalization of economics values is also linked with a lower concern with self-direction. According to the neo-Weberian sociological research on the value implications of economic rationality, the internalization of these values entails the homogenization of individual idiosyncrasies, choices and goals in accordance with the economic rationality of using the most efficient means to an end (Weber, 1978; DiMaggio & Powell, 1983; Ritzer, 2011). The homogenization of individuals' actions in accordance with economic rationality decreases their concern with self-direction and spontaneity by making their actions more predictable and consistent. The more individuals act in an economically rational way the less they pursue idiosyncratic actions that are inconsistent with economic rationality. Individuals who act in an economically rational way prefer to emphasize their usefulness to others instead of emphasizing their independence from external demands (Riesman et al., 1970; Whyte, 1957).

Moreover, psychological research based on self-determination theory suggests that the internalization of economics values, which emphasize extrinsically motivated involvement in an activity as means to an end, decreases individuals' concern with self-direction by undermining their intrinsically motivated involvement in an activity as an end in and of itself

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(Sheldon et al., 2004; Kasser et al., 2007). Since economically rational action is contingent on the availability of external rewards, such as, for example, pay or reputation, it undermines the intrinsically motivated involvement in an activity which is independent of external reinforcement (Deci, 1971; Deci & Ryan, 1987; Deci, Koestner & Ryan, 1999).

Internalization of economics values thus entails an increased concern with power and hedonism at the expense of self-direction. These values are therefore particularly likely to be affected by economics education. Building on our theoretical arguments on the impact of study peers in normatively homogenous economics programs, we propose that economics students of homogeneous programs will experience a stronger increase in power and hedonism than their counterparts of heterogeneous programs when they interact with their study peers, and a stronger decrease in self-direction. Our hypotheses are:

Hypothesis 1: Economics students in normatively homogeneous programs are likely to experience a stronger increase in power values than their counterparts from heterogeneous programs when they interact with their study peers.

Hypothesis 2: Economics students in normatively homogeneous programs are likely to experience a stronger increase in hedonism values than their counterparts from heterogeneous programs when they interact with their study peers.

Hypothesis 3: Economics students in normatively homogeneous programs are likely to experience a stronger decrease in self-direction values than their counterparts from heterogeneous programs when they interact with their study peers.

METHOD

Procedure and participants

To test our hypotheses, we conducted a two-year longitudinal study of economics undergraduates from a business school with a homogeneous economics program, the Latvian branch of one of the leading European business schools, the Stockholm School of Economics

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(SSER), and economics students from two leading Latvian university business schools with less homogeneous economics programs (University of Latvia and Riga Technical University).

The Stockholm School of Economics in Riga (SSER) is a Swedish government sponsored business school in Latvia that was opened in 1994 with the goal of preparing economics and business professionals for the newly emerging market institutions in a post-Soviet society. While economics students at the business schools of the two leading Latvian universities are exposed to a broader curriculum that, in addition to mainstream economics classes, also includes classes in humanities and social sciences (e.g., philosophy, history, political science, sociology, and psychology), at the SSER curricular alternatives are almost entirely limited to the major field. Moreover, SSER economics students interact primarily with the undergraduate population of the economics program. In contrast the academically heterogeneous administrative organization of Latvian universities is more likely to expose economics undergraduates to students from other academic disciplines. Therefore, economics students at the SSER are less likely to be exposed to ideas, theories, or methodologies that are incommensurable with the values of economic science.

To establish that the business schools differed in the normative homogeneity of their economics programs, we conducted interviews with three senior academics from the SSER and four of their counterparts from the two Latvian universities on the curriculum and organization of the economics programs at their institution. We then recruited two expert judges with a PhD in economics and asked them to evaluate the differences in the normative homogenization of the economics programs of the SSER and the two Latvian universities based on a detailed description of program curriculum and organization, and the seven transcribed interviews with senior academics. Experts judged the reliability of the differentiation using six items derived from Colander's (2001) conceptualization of the

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variations in the normative homogenization of economics education, namely: (a) emphasis on technical econometric methods; (b) exposure to non-economics classes; (c) emphasis on saving and investment in foundational economics classes; (d) class administration layout; (e) exposure to non-economics students; and (f) teaching staff with academic degrees from the more normatively homogeneous economics programs. Judges rated how reliable the programs could be distinguished on each criterion, using a 10-point scale, ranging from “unreliable” (1) to “reliable” (10). The mean rating of six items was 7.25 (SD = 1.53), suggesting that raters felt they could reliably distinguish between the economics programs at the SSER and at the two Latvian universities. The obtained measure of inter-rater reliability (intra-class correlation coefficient = .85) indicated a high degree of agreement among expert judges that the economics program of the SSER is distinctively more homogeneously guided by the values of economics than the economics programs of the two Latvian universities. We were thus confident that the SSER can be classified as a normatively homogeneous economics program, while the economics programs of the two Latvian universities were normatively heterogeneous.

We conducted two in-class surveys of economics undergraduates from the SSER and their counterparts from the two leading Latvian universities. Students were surveyed at the beginning of the first academic year (Time 1) and at the end of the second year of the economics program (Time 2). Exchange students from Western European societies, who were enrolled in economics programs of the SSER and Latvian universities for one semester or academic year (in total six students), were excluded from the survey. We surveyed students in-class rather than via e-mail or mail due to the probability of a higher response rate and quality of responses. Students from the SSER completed surveys in English, as the main language of instruction, and students from Latvian universities completed surveys in Latvian. To increase the proportion of participating students, we administered the survey during

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lectures or seminars with the highest student attendance. The survey was completed in approximately 20 minutes.

Longitudinal data were available for 77.3 per cent of respondents from the SSER (N = 85) and 62.9 per cent of respondents from the Latvian universities (N = 112). The results of ANOVAs indicated that students from the normatively heterogeneous economics programs of the two Latvian universities, i.e., University of Latvia and Riga Technical University, did not differ in any of the values at Time 1 (power: $F(1, 113) = .08, p = .78$; hedonism: $F(1, 104) = .09, p = .76$; self-direction: $F(1, 226) = .54, p = .46$). We also tested for differences in the value change of students of the two Latvian universities. We used ANCOVAs to test the effect of the university (University of Latvia and Riga Technical University) on Time 2 values, controlling for Time 1 values. Students of the two Latvian universities did not differ in their value change during the two year period of study (power: $F(1, 103) = .14, p = .71$; hedonism: $F(1, 042) = .08, p = .78$; self-direction: $F(1,049) = .19, p = .66$). This provides support for the argument that any differences in value change are due to differences in program normative heterogeneity rather than to differences in the institution students are enrolled in. Further, students of SSER and Latvian universities who responded at both time points did not differ from students who responded only at Time 1 in any of the values (power: $F(1, 247) = .01, p = .93$; hedonism: $F(1, 247) = .66, p = .42$; self-direction: $F(1, 247) = .97, p = .33$), suggesting that missingness at Time 2 was not related to the variables in our study. 70 percent of students were female, and students were on average 18.9 years old (SD = 0.75). In our analyses below we focus on the longitudinal sample (N = 197).

Methodology of research of academic socialization

We examine student value change in accordance with the following theoretical model of academic value socialization (Astin, 1970; Tinto, 1987; Weidman, 1989; Pascarella & Terenzini, 2005; see Figure 1). The model differentiates interaction effects of program

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homogeneity and peer interaction (effect e in Figure 1) from students' self-selection into their academic and interpersonal experiences based on their pre-enrollment values (effects a_1 and b_1). By controlling for the effects of pre-enrollment characteristics, we can rule out that students who more strongly endorse economics values select a more homogeneous program, or that they interact more with their study peers.

Insert Figure 1 about here

The model also differentiates the interaction effect between program homogeneity and peer interaction from the effects of students' pre-enrollment characteristics, i.e., pre-enrollment values, gender, age, ethnicity, parents' occupational status, and family income (effect c); and from program enrollment characteristics, i.e., program normative homogeneity (effect a_2), interaction with study peers (effect b_2), interaction with teachers, residence during study, class attendance and involvement in paid work during study (effect b_3), which have been highlighted as important confounds in theoretical models of academic socialization (Tinto, 1987; Weidman, 1989; Pascarella & Terenzini, 2005). Finally, because individuals are more likely to interact with others who they perceive to be similar to themselves (Newcomb, 1966; Vreeland & Bidwell, 1965; Tinto, 1987), we account for the possibility that students in normatively homogeneous programs interact more with their peers (effect d).

Measures

Power, hedonism, and self-direction values were measured using the Schwartz Value Survey (SVS; Schwartz, 1992). The SVS has been extensively validated across a variety of cultural contexts, meaningfully differentiating between various professional groups, personality attributes, and behaviors (Schwartz, 1992; Verplanken & Holland, 2002; Bain, Kashima, & Haslam, 2006; Bardi et al., 2009). The motivational goals of power, hedonism,

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and self-direction values are “social status and prestige, control or dominance over people and resources” (Schwartz, 1992: 9), “pleasure and sensuous gratification for oneself” (Schwartz, 1992: 8), and “independent thought and action – choosing, creating, exploring”, respectively (Schwartz, 1992: 6). Economics students in the SSER completed the SVS in English and their counterparts in Latvian universities completed a Latvian version of the survey that was translated by Austers (2002). The Latvian SVS has been shown to exhibit good validity and reliability (Kalnina, 2004; Schwartz, 2006; Tart, 2011). Cross-national studies support the measurement equivalence of the Schwartz’s value measures across different languages and cultures (Schwartz, 1992; Spini, 2003; Schwartz & Boehnke, 2004; Fontaine et al., 2008).

The SVS asks participants to rate the importance of 57 values “as a guiding principle in my life” on a nine-point scale. Scale anchors are: “of supreme importance” (7), “important” (3), “not important (0), and “opposed to my values” (-1). Value items are presented in two lists. Before rating each value item, participants identify the least and most important values. As specified by Schwartz (1992), we centered value scores on the mean importance attributed to all SVS value items.

Scale reliabilities of power, hedonism, and self-direction value measures, comprised of 4, 3, and 5 items, respectively (Schwartz, 1992), were .67, .65, and .58 at Time 1, and .66, .72, and .66 at Time 2. Specifically, the reliabilities of power, hedonism, and self-direction values in the SSER sample were .69, .67, and .57 at Time 1, and .68, .72 and .65 at Time 2; in the Latvian university sample the reliabilities were .66, .64, and .59 at Time 1, and .64, .73, and .67 at Time 2. These scores indicate an acceptable, yet comparatively low level of scale reliability, which is often the case when a small number of items are used to assess a construct (Hair, Black, Babin, & Anderson, 2010). Prior cross-cultural research has reported similar reliabilities for the measures of Schwartz’s value types (Verplanken & Holland, 2002;

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Grouzet et al., 2005; Schwartz & Rubel, 2005; Bain, Kashima & Haslam, 2006; Bardi et al., 2009).

A confirmatory factor analysis using maximum likelihood estimation method in MPlus 7 (Muthén & Muthén, 2012) supported the validity of a three-factor model distinguishing between power, hedonism, and self-direction values at Time 1 ($\chi^2 = 106.44$, $df = 51$; RMSEA = 0.07; CFI = 0.87; SRMR = 0.06). This model fit the data significantly better than alternative models including a one-factor model ($\chi^2 = 217.44$, $df = 54$; RMSEA = 0.11; CFI = 0.63; SRMR = 0.09; $\Delta\chi^2$ ($df = 3$) = 110.70, $p < .001$), and a two-factor model in which power and hedonism were specified to load onto one factor, and self-direction loaded onto a second factor ($\chi^2 = 172.09$, $df = 53$; RMSEA = 0.10; CFI = 0.73; SRMR = 0.07; $\Delta\chi^2$ ($df = 2$) = 45.05, $p < .001$). We concluded that the three values should be treated as distinct variables.

Interaction with study peers. Peer interaction was measured with an index consisting of four items used by Weidman (1979) and Lacy (1978) to measure the normative impact of study peers. We measured peer interaction using a combination of the following four items. The first item was: “Of all your close friends, what proportion are students in this school/Economics bachelor program?” Responses were provided on a four-point ordinal scale ranging from “none” (0) to “all” (4). A further two items asked participants how often they attended a house party and/or a birthday/name day celebration together with other students from their Bachelor program during the academic year. The final item assessed the number of hours per week that participants on average spent studying together with other students. Before computing an index each component variable was standardized. Items that measure the frequency of student formal and informal interaction with study peers have been demonstrated to have good predictive validity, meaningfully predicting student behaviors and attitudes during study (Lacy, 1978; Astin, 1993; Pascarella & Terenzini, 1980, 2005). Scale reliability for the four item measure of peer interaction was .66.

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Controls. We controlled for other factors that have been highlighted as potential confounding variables in student value change by theoretical models of academic socialization (Weidman, 1989; Pascarella & Terenzini, 2005). We specifically controlled for relevant enrollment characteristics, i.e., class attendance, interaction with teachers, residence during study, and involvement in salaried work during study; and for relevant pre-enrollment characteristics, i.e., gender, age, ethnicity, parents' occupational status, and family income.

(a) Class attendance was measured as the degree of attendance of lectures and seminars on a 6-point scale ranging from "91-100%" (6), to "50% and less" (1). (b) Interaction with teachers was assessed using a formative indicator consisting of four items from Wilson et al.'s (1975) inventory that measured the number of times during the academic year that students met with their teachers to discuss class-related matters. (c) Following prior research on academic socialization (Vreeland & Bidwell, 1965; Lacy, 1978; Weidman, 1989; Tinto, 1987), we differentiate the impact of interaction with study peers from the impact of residence in dormitory. While the former entails interaction with students from the same academic discipline, the latter entails residence with students irrespective of their discipline. Residence during study was coded as 0 (resides independently of students) and 1 (resides with students). (d) Salaried work during study was measured as the number of hours per week that students were typically involved in doing salaried work during study. (e) Gender was coded as 1 (female) and 0 (male). (f) Age was measured on 5-point interval scale, anchored from "18 years of age and less" (1) to "22 years of age and more" (5). (g) Ethnicity was coded as 1 (Latvian) and 0 (other ethnic groups). (h) Parents' occupational status was a combined measure of the father's and mother's occupation using a 10-point ordinal scale ranging from "manager: middle or higher level" (1) to "office worker: lower level" (5) to "pensioner" (10). (i) Family income per capita was assessed with a 35-point interval scale ranging from "up to 10 Latvian Lats" (1) to "351 Latvian Lats and more" (35).

Data analyses

Following the established methodological practice in research on academic socialization we measured student value change using the longitudinal design of OLS regression with the “regressor variable method” (Astin, 1991; Pascarella & Terenzini, 2005). We regressed students’ Time 2 values on their Time 1 values and other pre-enrollment and enrollment characteristics in accordance with the model of academic socialization specified in Figure 1. The regressor variable method was chosen over the “change scores method” that uses value change scores as the criterion (Cronbach & Furby, 1970; Diggle, Heagerty, Liang & Zeger, 2013). Compared to the regressor variable method, the change scores approach tends to be less reliable (Kessler, 1977) and is more likely to be limited by regression towards the mean in the assessment of attribute change (Markus, 1980). The regressor variable method also enabled us to differentiate the effects of Time 1 values on Time 2 values from the effects of students’ pre-enrollment and enrollment characteristics (Astin, 1991).

RESULTS

Tables 1 and 2 present descriptive statistics and correlations of study variables.

Insert Tables 1 and 2 about here

We first established that economics students did in fact experience value change by conducting a set of ANCOVAs, comparing value change in students from the normatively homogenous SSER and the heterogeneous programs of the Latvian universities. The results showed that economics students at the SSER as well as students at the Latvian universities experienced an increase in the priority of power ($F = 21.19, p < .001$; and $F = 49.97, p < .001$, respectively) and hedonism ($F = 44.82, p < .001$; $F = 59.30, p < .001$), and a decrease in the priority of self-direction ($F = 35.29, p < .001$; $F = 38.25, p < .001$). The results also indicated

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that economics students at the SSER experienced a stronger increase in power values than their counterparts from the Latvian universities ($F = 7.11, p = .008$). There were no differences in the extent of value change for hedonism ($F = 0.16, p = .694$) and self-direction ($F = 0.72, p = .398$) between economics students from the SSER and students from the normatively heterogeneous programs at the Latvian universities.

OLS regression analyses supported this pattern of findings (effect a_2 in Figure 1; see Table 2). Controlling for students' pre-enrollment and enrollment characteristics, including Time 1 values, program normative homogeneity had a significant effect on power ($\beta = .21, p = .047$), but not on hedonism ($\beta = .11, p = .32$) and self-direction ($\beta = .08, p = .52$) at Time 2, suggesting a greater change of power values, but not of hedonism and self-direction, in the normatively homogeneous program.

Insert Table 2 about here

Our hypotheses predicted that economics students in normatively homogenous programs are likely to experience a stronger increase in power values (Hypothesis 1) and hedonism values (Hypothesis 2) and a stronger decrease in self-direction values (Hypothesis 3) than their counterparts from heterogeneous programs when they interact with their study peers. To test our hypotheses, we used moderated regression analyses, following the procedures recommended by Aiken and West (1991). We centered the predictor variables and multiplied them to create interaction terms. We then regressed the Time 2 values onto the control variables, the Time 1 values, and the interaction term, in accordance with the model of academic socialization (Figure 1: effects c, a_2, b_2, b_3, e). The results of the OLS regression are presented in Table 2. There was a near-significant interaction between program normative homogeneity and peer interaction in predicting power at Time 2 ($\beta = .13, p = .065$), providing

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some support for Hypothesis 1. Consistent with Hypotheses 2 and 3, there was a significant interaction between program normative homogeneity and peer interaction in predicting hedonism ($\beta = .16, p = .037$) and self-direction at Time 2 ($\beta = -.24, p = .003$).³

We conducted simple slope tests to explore in more detail whether the effects of peer interaction on value change would vary across normatively homogeneous versus heterogeneous programs. In line with our arguments, students at the SSER with high levels of peer interaction experienced a stronger change in values (power: $b = .80, t = 2.13, p < .05$; hedonism: $b = .66, t = 2.28, p < .05$; self-direction: $b = -.63, t = -2.89, p < .01$). For students at the normatively heterogeneous Latvian university business schools, peer interaction was not associated with value change (power: $b = .21, t = 1.40, p = .16$; hedonism: $b = .66, t = 2.28, p < .05$; self-direction: $b = -.05, t = -0.52, p = .61$). This provides support for the idea that peer interaction plays a role in influencing value socialization in normatively homogeneous programs, but not in normatively heterogeneous programs.

We further explored the possibility of student self-selection effects accounting for our findings in accordance with the model of academic socialization. First, we explored whether students' pre-enrollment values shaped their self-selection into more or less homogeneous economics programs using a binary logistic regression (effect a_1 in Figure 1; see Table 3). Controlling for students' pre-enrollment characteristics, their initial values did not predict their enrollment in the SSER or Latvian universities (power: Wald statistic = 1.17, $p = .28$; hedonism: Wald statistic = 1.25, $p = .26$; self-direction: Wald statistic = 0.92, $p = .34$). Pre-enrollment values thus did not explain students' self-selection into the different programs.

Second, we explored whether students' interaction with peers was shaped by their pre-enrollment values. Using OLS regression, we regressed students' interaction with peers on their values at the beginning of the study, controlling for their demographic characteristics and program normative homogeneity (effects b_1 and d in Figure 1; see Table 4). The results

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presented in Table 4 indicate that students' values at the beginning of the economics program did not exert a significant effect on the likelihood of their interaction with study peers (power: $\beta = .07$; $p = .27$; hedonism: $\beta = .10$, $p = .14$; self-direction: $\beta = .03$, $p = .71$). Students' pre-enrollment values were not related to how much they interacted with their peers. The results also indicate that program normative homogeneity exerted a significant effect on the likelihood of students' interaction with peers ($\beta = .23$, $p = .01$), suggesting that economics students of SSER were more likely to interact with each other than their counterparts from Latvian universities.

Insert Tables 3 and 4 about here

DISCUSSION

In line with previous research, we found evidence for value change in economics students over the course of their study. Our study was based on theoretical models of academic socialization and provided support for the effects of economics programs on values using a longitudinal design and controlling for pre-enrollment characteristics and theoretically important confounds.

Our study advances research on the normative impact of economics education by highlighting the role of its normative homogenization. We investigated value change in students enrolled at a normatively homogenous economics program and at two normatively heterogeneous economics programs, and found some support for more pronounced value change in the normatively homogenous economics program.

To gain insight into how value transmission may be influenced by the normative homogeneity of economics education, we examined peer interaction as a key mechanism of value socialization in more or less normatively homogeneous economics programs. Providing

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initial support for this idea, we found that economics students in normatively homogeneous programs experience a stronger change in values than their counterparts from heterogeneous programs when they interact with their study peers. In normatively heterogeneous programs, interaction with study peers was not associated with value change. Below we consider the theoretical and practical implications of our findings.

Theoretical implications

We contribute to a limited, but growing, research stream on the impact of the homogenization of economics education on student normative socialization (Frank et al., 1993; Frey & Meier, 2005). While management scholars have become increasingly concerned with the normative effects of the homogenization of economics education in business schools (Ghoshal, 2005; Giacalone & Thompson, 2006; Henisz, 2011), these effects have received little empirical attention. We advance understanding of these effects by highlighting interaction of study peers as a theoretically important, yet empirically under-examined, mechanism (Newcomb, 1966; Weidman, 1989; Pascarella & Terenzini, 2005) through which normatively homogeneous economics programs are likely to shape student values. Our findings suggest that as economics students interact with each other during their studies, they internalize the self-interest oriented values of economics (Ghoshal, 2005; Ferraro et al., 2005), when these values are homogeneously endorsed in their program of studies.

Consistent with the results of Frank, Gilovich and Regan's (1993) study, power values increased more strongly in the normatively homogeneous economics program. We advance Frank et al.'s (1993) theoretical insights on the normative impact of homogeneous education by highlighting the unique influence of student interaction in the transmission of power values in homogeneous economics programs. In these programs students are less likely to be exposed to normative perspectives that contradict economics assumptions in their interactions

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with study peers (Miller, 1999). In social interactions this creates the impression of consensus regarding the “typical” values endorsed by students’ peers (Wang et al., 2011). In addition, the values of homo economicus emphasize social comparison and self-enhancement, potentially further enhancing the impact of study peers on internalization of power values (Kasser et al., 2007; Srivastava et al., 2001).

Although hedonistic maximization has been recognized as a core assumption of economics (Lewin, 1996; Drakopoulos, 1991; Weber, 1978), it has been little examined in prior research on the socialization of economics students (Gandal et al., 2005). Our findings suggest that in homogeneous economics programs students are inclined to internalize hedonism values when they interact with study peers. As students interact with each other in homogeneous economics programs, they may internalize economics values that emphasize the pursuit of hedonistic satisfaction by using various ‘economic goods’, such as products, services and people (Drakopoulos, 1991). In these programs students may be normatively pressured to internalize hedonism values in their interactions to avoid normative sanctions for noncompliance with these values.

Prior research has linked economics education with a lower concern with self-direction (Kasser & Ahuvia, 2002). Our findings suggest that in homogeneous economics programs students are likely to experience a decrease in self-direction values when they interact with study peers. In these programs students may experience a strong normative pressure to act in an economically rational way by de-emphasizing the importance of their independence from external demands (Riesman et al., 1970; Weber, 1978). Moreover, the principles of economically rational action emphasize an extrinsically motivated involvement in activity as means to an end. Internalizing these principles may inhibit students’ self-direction by undermining their intrinsically motivated involvement in activity as an end in and of itself (Kasser et al., 2007, Sheldon et al., 2004).

Practical implications

Understanding the effects of economics education on value change is important, because, once internalized, values remain relatively stable and shape behaviors and attitudes across different vocational and social contexts (Rokeach, 1973; Schwartz, 1992). The influence of value change thus extends far beyond students' time at business school and shapes their future choices and behaviors throughout their career. Since business school graduates tend to occupy strategic decision-making positions in organizations, their values also serve as normative standards for the formation and reproduction of prevailing economic and social institutions (Gandal et al., 2005).

Management scholars increasingly recognize the unintended normative effects of the homogenization of business school education in accordance with economics values, and seek to understand ways to minimize these effects (Ghoshal, 2005; Giacalone & Thompson, 2006; Henisz, 2011; Moosmayer, 2012). Our findings provide some support for a more pronounced value change in normatively homogenous programs. They further highlight that in normatively homogeneous programs peer influence plays a critical role in the internalization of economics values. This has implications for business school leaders and policy makers that seek to prevent students' internalization of economics values.

Exposing students to a more diverse peer group may potentially prevent the transmission and socialization of economics values by minimizing the likelihood of a "false consensus" concerning the universal endorsement of these values among study peers. In the Latvian university business schools in our study economics students are exposed to a wider academic curriculum where, in addition to mainstream economics and business subjects, they are also expected to take classes in humanities and social sciences more generally (e.g. philosophy, history, political science, sociology, psychology etc.) which is likely to expose them to a more diverse peer group. In contrast, the organizational isolation of the SSER is

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likely to restrict student interactions primarily to the undergraduate population of the economics program.

Policy makers may be able to prevent the internalization of power values, by encouraging student interaction in academic programs that balance the study of econometric techniques with the study of the more generalized insights of classical political economy (Colander, 2001), institutional economics (Shiller, 2010; Henisz, 2011), business ethics (Evans et al., 2006; Giacalone, 2007; Rutherford et al., 2012), and other social sciences such as sociology or political science that place a stronger emphasis on the pursuit of pro-social goals (Giacalone & Thompson, 2006; Ghoshal, 2005). Our findings suggest that peer interaction in a more diversified academic program can prevent the internalization of power values by providing students with an opportunity to discuss, and reflect on, the underlying principles of economics and the intended and unintended consequences of their application in society.

Policy makers may also prevent the internalization of economics values by facilitating student interaction in diversified academic programs with the generalized class administration layout. In the Latvian university business schools, classes are administered parallel to each other. During a four-month semester students take four to six classes. In the SSER classes are administered in a sequence of one after another. Students attend one class at a time for the duration of two to four weeks. The former class administration layout provides students with an opportunity to compare and integrate the content of diverse classes during their discussions with study peers. This is likely to prevent an unreflective internalization of economics values.

Finally, policy makers in business schools may also reduce the impact of study peers on value change by recruiting members of teaching staff with a generalized training in social sciences (Moosmayer, 2012). Policy makers may recruit professors of economics who

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investigate economic processes in conjunction with sociological, political, or psychological processes, or professors of management with an inter-disciplinary training in social sciences. Recruitment of teaching staff with the generalized academic training is likely to reduce socialization of economics values during students' interactions by developing learning culture that encourages discussion of the role of values in social sciences.

Limitations

The longitudinal design of our study is a strength of the present paper and enables us to overcome a number of important limitations of previous research on the normative socialization of economics students. However, the study design also has a number of limitations.

It is plausible that the differential effects of peer interaction in the economics programs of SSER and Latvian universities may be shaped by variations in student experiences other than program homogeneity (Astin, 1991). However, we control for students' involvement in various academic and social experiences that have been highlighted as theoretically important confounds of student value change by models of academic socialization (Weidman, 1989; Tinto, 1987; Pascarella & Terenzini, 2005). For example, we differentiate the effects of peer interaction from other forms of students' academic involvement, i.e., class attendance and interaction with teachers, and social involvement, such as residence with students irrespective of their academic discipline.

Differential effects of peer interaction may be confounded with differences in students' socio-economic status (Lueg & Lueg, 2014) and pre-enrollment values (e.g., Marwell & Ames, 1981; Yezer et al., 1996), as well as program tuition and admission policies (Pascarella & Terenzini, 2005). At the time when the survey was administered the tuition fee for SSER economics students was only 25 percent higher than for their counterparts in Latvian universities, so while the costs of attending the SSER were somewhat

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greater, the difference in fees was not particularly drastic. Further, we controlled for the confounding effects of students' family income, parents' occupational status, belonging to a minority ethnic group, and involvement in paid work during study. In addition, our findings show that economics students' pre-enrollment values were not related to their choice of program or to the extent of their interaction with study peers. There is thus some support for the idea that the differential effects of peer interaction are unlikely to be due to differences in student admission policies between the SSER and Latvian universities.

Further, the normatively homogeneous and heterogeneous economics programs in our study may also have differed in other characteristics, such as their teaching methods. We sought to capture normative differences between the programs based on Colander's (2001) classification of theoretically relevant program characteristics, such as, for example, emphasis on technical econometric methods, emphasis on saving and investment in foundational economics, and exposure of students to non-economics classes and students. Expert judges reliably distinguished between the programs based on these characteristics.

Similarly, it is plausible that institutions which offer normatively homogeneous versus heterogeneous programs, respectively, may also differ in their goals and culture. However, the goals and culture of academic programs are shaped by their underlying values (Parsons & Platt, 1973; Smart, Feldman & Ethington, 2000; Pascarella & Terenzini, 2005). We differentiate the economics programs of the SSER and Latvian universities based on their homogenization in accordance with the values of homo economicus (Colander, 2001). We thus focus on the differences in the normative orientation of these institutions that are likely to account for other potential dissimilarities.

The programs also differed in their language of instruction. There is some support for the idea that language of instruction matters to student behavior. Urbig et al. (2015) found that Dutch students who studied in a business school with English as a language of

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instruction were more inclined to free-ride than their counterparts who studied in their native language. However, extensive cross-national research demonstrates that the reorganization of societies in accordance with the values of economics (i.e., economic rationalization) shapes the internalization of these values, irrespective of the linguistic, cultural, or ethnic characteristics of societies (Hofstede, 2001; Inglehart & Welzel, 2005; Kirkman, Lowe & Gibson, 2006). Moreover, economics students in Latvian universities mainly use coursework materials in English (e.g., textbooks, journal articles and case study readings) and are likely to learn concepts in the same language as students in SSER.

In the present paper, we focused on three values which we argued are likely to be shaped by interactions of economics students. However, interactions of economics students may be also associated with the change of other values that are normatively opposed to the self-interest goals of homo economicus, such as, for example, pro-social values emphasizing public good and welfare (Marwell & Ames, 1981).

A final limitation of our study is that we administered the survey in English as well as in Latvian, which constitutes a further potential confound. This concerns primarily our value measure as the other variables in our study are assessed via formative indicators which, due to their nature as composites, are unlikely to be affected by translation problems or cultural differences in responses (Graham & Mintu-Wimsat, 1997). We used a Latvian version of the Schwartz Value Survey (SVS) that was translated by Austers (2002) and has been shown to have adequate validity and reliability (Kalnina, 2004; Schwartz, 2006; Tart, 2011).

Encouragingly, the internal consistencies of power, hedonism and self-direction value measures in Time 1 and 2 were very similar across the student populations of the SSER and the Latvian universities, which is consistent with the results of prior cross-cultural research that supports the equivalence of Schwartz's value measures in different languages (Schwartz, 1992; Spini, 2003; Schwartz & Boehnke, 2004; Grouzet et al., 2005; Fontaine et al., 2008).

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While the reliabilities of the three value scales were consistent across the two languages, they were relatively low. However, as noted by Schwartz (1992), these reliabilities can be considered acceptable because the scales are comparatively short. The reliabilities of the value measures in our study are in line with previous research which has reported similar scale reliabilities of Schwartz's value measures (Verplanken & Holland, 2002; Grouzet et al., 2005; Schwartz & Rubel, 2005; Bain, Kashima & Haslam, 2006; Bardi et al., 2009).

Future research directions

Future research may develop the insights of this study further by providing a more nuanced understanding of the effects of the normative homogenization of economics education on student value socialization. We argued that the economics program of SSER is more homogeneously guided by the values of homo economicus than the economics programs of Latvian university business schools (Giacalone & Thompson, 2006; Colander, 2001). Drawing on theoretical models of academic socialization (Weidman, 1989; Pascarella & Terenzini, 2005) we expected, and found, that in the more normatively homogeneous program students' values would be more strongly influenced by their peers. We suggested that this is because in homogeneous program students were less exposed to normative alternatives, resulting in a false consensus effect in their social interactions (Wang et al., 2011). However, we did not directly measure the content of student interactions in terms of their involvement in the discussion of economics principles and assumptions. Future studies may fruitfully explore the content of student interactions using qualitative methods, or event-contingent diary study methodologies in which students report on the content of interactions as they occur, thus preventing retrospective bias (Reis & Wheeler, 1991).

Future research may advance understanding of peer influence in economics programs by examining the value orientations of the peers students interacted with, and by exploring students' perceptions of their peers' values. Social network analysis may be used to

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investigate the normative effects of students' involvement in networks with study peers that prioritize the pursuit of economics values or that enable students to fulfill economics values in their day to day activities.

A more nuanced account of the normative effects of student interaction may be also developed by examining the moderating role of the homogenization of the peer group. For example, research could investigate how value change is affected by interactions with study peers who vary in the duration of their exposure to economics education. Future studies may also explore the normative effects of students' interaction with study peers that are enrolled in normatively homogenous economics classes or ethics-related classes which counterbalance the normative effects of economics education. Research could more systematically investigate a wider range of program characteristics to more clearly establish the unique effects of the interaction between program normative homogeneity and peer influence.

Research may also fruitfully assess the moderating effects of the cross-national variations in economic rationalization on the normative impact of peers in economics education. Future studies could examine if the impact of student interaction on value change is strengthened by the economic rationalization of societies. A more nuanced understanding of the normative impact of peers in economics education may be gained by examining the three-way interaction effects between the student interaction, program normative homogeneity and economic rationalization of societies.

Conclusion

In this study we have investigated value change in students from more or less normatively homogeneous economics programs and have illuminated the role of peer interaction in the socialization of economics values. By examining the value implications of interaction with study peers, we highlight an important mechanism of value socialization in economics education. The impact of student interaction on value change depends on the

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extent to which business school education is homogenized in accordance economics values. Values of business school graduates not only shape their career choices, but also guide the development of strategic priorities in the private and public sector (Ghoshal, 2005). By highlighting peer interaction as an important mechanism of their socialization, this study enables business school leaders to better understand the consequences of program design for the values of economics graduates. This is important in order to improve the institutional standards of business practices. If economics not only predicts, but also shapes social phenomena in accordance with its values, then understanding how these values are socialized is critical for the informed, purposeful, and responsible selection and implementation of academic policies in business education.

REFERENCES

- Aiken, L. S., & West, S. G. 1991. *Multiple regression: Testing and interpreting interactions*. Newbury Park, London: Sage.
- Antonio, AL (2004). The influence of friendship groups on intellectual self-confidence and educational aspirations in college. *The Journal of Higher Education*, 75(4): 446-471.
- Astin, A.W. 1970. The methodology of research on college impact, Part one. *Sociology of Education*, 43: 223-254.
- Astin, A.W. 1991. *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. New York: Macmillan.
- Astin, A.W. 1993. *What matters in college? Four critical years revisited*. San Francisco: Jossey-Bass Publishers.
- Austers, I. 2002. Attribution of value stereotypes as a consequence of group membership: Latvian and Russian students living in Latvia compared. *International Journal of Intercultural Relations*, 26: 273-285.
- Bain, P. G., Kashima, Y., & Haslam, N. 2006. Conceptual beliefs about human values and their implications: Human nature beliefs predict value importance, value trade-offs, and responses to value-laden rhetoric. *Journal of Personality and Social Psychology*, 91(2): 351-367.
- Bardi, A., Lee, J.A., Hofmann-Towfigh, N., & Soutar, G. 2009. The structure of intraindividual value change. *Journal of Personality and Social Psychology*, 97(5): 913-929.
- Becker, G. S. 1976. *The economic approach to human behavior*. Chicago: University of Chicago Press.

VALUE CHANGE IN ECONOMICS EDUCATION

- Bengtson, V. L., & Black, K. D. 1973. Intergenerational relations and continuities in socialization. In P. Baltes & K. W. Schaie, Eds., *Life-span developmental psychology: Personality and socialization*: 208 –234. New York: Academic.
- Bennis, W. G., & O’Toole, J. 2005. How business schools lost their way. *Harvard Business Review*, 83: 96–105.
- Blaug, M. 1992. *The methodology of economics*. Cambridge: Cambridge University Press.
- Bouas, K. S., & Komorita, S. S. 1996. Group discussion and cooperation in social dilemmas. *Personality and Social Psychology Bulletin*, 22, 1144-1150.
- Bourne, H., & Jenkins, M. 2013. Organizational values: A dynamic perspective. *Organization Studies*, 34: 495-514.
- Clark, B.R., & Trow, M. 1966. The organizational context. In T. Newcomb & E. Wilson (Eds.). *College Peer Groups*. Chicago: Aldine.
- Colander, D. 2001. *The lost art of economics*. Cheltenham: Edward Elgar.
- Cronbach, L.J., & Furby, L. 1970. How we should measure change – or should we? *Psychological Bulletin*, 74: 32-49.
- Curtis, R. F. & Jackson, E. F. 1962. Multiple indicators in survey research. *American Journal of Sociology*, 68(2): 195-204.
- Deci, E. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18: 105–115.
- Deci, E. L. & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, 53: 1024–1037.
- Deci, E.L., Koestner, R., Ryan, R.M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125: 627-668.

VALUE CHANGE IN ECONOMICS EDUCATION

Diggle, P. J., Heagerty, P., Liang, K.-Y., & Zeger, S.L. 2013. *Analysis of longitudinal data*.

Oxford: Oxford University Press.

DiMaggio, P. J. & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48: 147-60.

Drakopoulos, S. A. 1991. *Values and economic theory: The case of hedonism*. Aldershot: Avebury.

Evans, J. M., Trevino, L. K., & Weaver, G. R. 2006. Who's in the ethics driver's seat? Factors influencing ethics in the MBA curriculum. *Academy of Management Learning & Education*, 5: 278–293.

Feldman, D. C. 1981. The multiple socialization of organization members. *Academy of Management Review*, 6(2): 309-318.

Feldman, K. & Weiler, J. 1976. Changes in initial differences among major-field groups: An exploration of the accentuation effect. In W. Sewell, R. Hauser and D. Featherman (eds.) *Schooling and Achievement in American Society*. Orlando: Academic Press.

Ferraro, F., Pfeffer, J., & Sutton, R. I. 2005. Economics language and assumptions: How theories can become self-fulfilling. *Academy of Management Review*, 30: 8-24.

Fontaine, J.R., Poortinga, Y.H., Delbeke, L., Schwartz, S.H. 2008. Structural equivalence of the values domain across cultures: Distinguishing sampling fluctuations from meaningful variation. *Journal of Cross-Cultural Psychology*, 39: 345-365.

Frank, B. and Schulze, G. G. 2000. Does economics make citizens corrupt? *Journal of Economic Behavior and Organization*, 43: 101-113.

Frank, R. H., Gilovich, T., & Regan, D.T. 1993. Does studying economics inhibit cooperation? *Journal of Economic Perspectives*, 7: 159-171.

VALUE CHANGE IN ECONOMICS EDUCATION

- Franks, D.D., Falk, R.F., and Hinton, J. (1973). Differential exposure to courses in two majors and differences in students' value responses. *Sociology of Education*, 46(3): 361-369.
- Frey, B. S. & Meier, S. 2005. Selfish and indoctrinated economists? *European Journal of Law and Economics*, 19: 165-171.
- Gandal, N., Roccas, S., Sagiv, L., & Wrzesniewsky, A. 2005. Personal value priorities of economists. *Human Relations*, 58: 1227-1252.
- Ghoshal, S. 2005. Bad management theories are destroying good management practices. *Academy of Management Learning & Education*, 4: 75-91.
- Giocalone, R. A. & Thompson, K.R. 2006. Business ethics and social responsibility education: Shifting the worldview. *Academy of Management Learning & Education*, 5: 266-277.
- Giocalone, R. A. 2007. Taking a red pill to disempower unethical students: Creating ethical sentinels in business schools. *Academy of Management Learning & Education*, 6: 534-542.
- Giocalone, R. A., Jurkiewicz, C. L., & Deckop, J. R. 2008. On ethics and social responsibility: The impact of materialism, postmaterialism, and hope. *Human Relations*, 61: 483-514.
- Girves, J. E., & Wemmerus, V. 1988. Developing models of graduate student degree progress. *Journal of Higher Education*, 59, 163-189.
- Graham, J. & Mintu-Wimsat, A. 1997. Culture's influence on business negotiations in four countries. *Group Decision and Negotiation*, 6(5): 483-502.
- Greller, M. M. 1980. Evaluation of feedback sources as a function of role and organizational level. *Journal of Applied Psychology*, 65, 24- 27.

VALUE CHANGE IN ECONOMICS EDUCATION

- Grouzet, F., Kasser, T., Ahuvia, A., Fernandez-Dols, J. M., Kim, Y., Lau, S., Ryan, R. M., Saunders, S., Schmuck, P., & Sheldon, K. M. 2005. The structure of goal contents across fifteen cultures. *Journal of Personality and Social Psychology*, 89: 800–816.
- Hair J.F., Black, W.C., Babin, B.J. & Anderson, R.E. 2010. *Multivariate data analysis: A Global Perspective*. London: Pearson.
- Henisz, W.J. 2011. Leveraging the financial crisis to fulfill the promise of progressive management. *Academy of Management Learning & Education*, 10: 298-321.
- Hitlin, S., and Piliavin, J.A. 2004. Values: Reviving a dormant concept. *Annual Review of Sociology*, 30: 359–93.
- Hofstede, G. 2001. *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Beverly Hills: Sage.
- Hollis, M., & Nell, J. E. 1975. *Rational economic man: A philosophical critique of neo-classical economics*. Cambridge: Cambridge University Press.
- Hoyt, G.M., & McGoldrick, K.M. 2013. *International Handbook of Teaching and Learning Economics*. Cheltenham: Edward Elgar Publishing.
- Inglehart, R., and Welzel, C. 2005 *Modernisation, cultural change, and democracy: The human development sequence*. Cambridge: Cambridge University Press.
- Jevons, W. S. 1871. *The theory of political economy*. London: Macmillan.
- Kahneman, D., Knetsch, J.L. and Thaler, R.H. 1986. Fairness and the assumptions of economics. *Journal of Business*, 59(4): 285-300.
- Kalnina, E. 2004. Gender socialization patterns and individualism-collectivism in Latvia. *Socialnia Mokslai* 1(43): 28-32.
- Kasser, T. 2002. Sketches for a self-determination theory of values. In E.L. Deci and R.M. Ryan (eds.), *Handbook of self-determination research* (pp. 123-140). Rochester: University of Rochester Press.

VALUE CHANGE IN ECONOMICS EDUCATION

Kasser, T., & Ahuvia, A. 2002. Materialistic values and well-being in business students.

European Journal of Social Psychology, 32: 137-146.

Kasser, T., Cohn, S., Kanner, A.D., & Ryan, R.M. 2007. Some costs of American corporate capitalism: A psychological exploration of value and goal conflicts. *Psychological Inquiry*, 18: 1-22.

Kasser, T., Vansteenkiste, M., & Deckop, J. R. 2006. The ethical problems of a materialistic value orientation for businesses (and some suggestions for alternatives). In J. R. Deckop (ed.), *Human Resource Management Ethics* (pp. 283-306). Greenwich, CT: Information age publishing.

Kay, A. C., Wheeler, S. C., Bargh, J. A., & Ross, L. 2005. Material priming: The influence of mundane physical objects on situational construal and competitive behavioral choice. *Organisational Behaviour and Human Decision Processes*, 95: 83-96.

Kelley, H. H., & Stahelski, A. J. 1970. Social interaction basis of cooperators' and competitors' beliefs about others. *Journal of Personality and Social Psychology*, 16, 190-197.

Kessler, R.C. 1977. Use of change scores in criteria in longitudinal survey research. *Quality and Quantity* 11: 43-66.

Kirkman, B.L., Lowe, K.B., and Gibson, C.B. 2006. A quarter century of culture's consequences: A review of empirical research incorporating Hofstede's cultural values framework. *Journal of International Business Studies*, 37: 285-320.

Kluckhohn, C. 1951. Values and value-orientations in the theory of action: an exploration in definition and classification. In T. Parsons and E.A. Shils (eds.), *Toward a general theory of action*. Cambridge: Harvard University Press.

Korte, R. 2010. "First get to know them" A relational view of organisational socialization. *Human Resource Development International*, 13: 27-43.

VALUE CHANGE IN ECONOMICS EDUCATION

- Lacy, W.B. 1978. Interpersonal relationships as mediators of structural effects: College student socialization in a traditional and an experimental university environment. *Sociology of Education*, 51: 201-211.
- Lewin, S. B. 1996. Economics and psychology: Lessons from our own day from the early twentieth century. *Journal of Economic Literature*, 34: 1293-1323.
- Liberman, V., Samuels, S. M., & Ross, L. 2004. The name of the game: Predictive power of reputations versus situational labels in determining prisoner's dilemma game moves. *Personality and Social Psychology Bulletin*, 30: 1175-1185.
- Lueg, K., & Lueg, R. 2014. Why do students choose English as a medium of instruction? A Bourdieusian perspective on the study strategies of non-native English speakers. *Academy of Management Learning & Education* published online before print January 10, 2014, doi:10.5465/amle.2013.0009.
- Marks, G. & Miller, N. 1987. Ten years of research on the false-consensus effect: An empirical and theoretical review. *Psychological Bulletin*, 102: 72-90.
- Markus, G. 1980. *Models for the analysis of panel data*. Beverley Hills: Sage.
- Marwell, G. & Ames, R. 1981. Economists free ride, does anyone else? *Journal of Public Economics*, 15: 295-310.
- Meglino, B.M., & E.C. Ravlin 1998. Individual values in organizations: Concepts, controversies and research. *Journal of Management* 24: 351-389.
- Milem, J.F. 1998. Attitude change in college students: Examining the effect of college peer groups and faculty normative groups. *Journal of Higher Education*, 69: 117-140.
- Mill, J.S. 1967. *Collected works, essays on economy and society*. J.M. Robson (ed.). Toronto: University of Toronto Press, Vol. 4.
- Miller, D. T. 1999. The norm of self-interest. *American Psychologist*, 54: 1053-1060.

VALUE CHANGE IN ECONOMICS EDUCATION

- Miller, D.T. and Ratner, R.K. 1998. The disparity between the actual and assumed power of self-interest. *Journal of Personality and Social Psychology*, 74: 53-62.
- Mintzberg, H. 2004. *Managers not MBAs: A hard look at the soft practice of management and management development*. San Francisco, CA: Berrett-Koehler Publishers.
- Mintzberg, H. 2005. How inspiring. How Sad. Comment on Sumantra Ghoshal's paper. *Academy of Management Learning & Education*, 4: 108.
- Molinsky, A., Grant, A. M., & Margolis, J. D. 2012. The bedside manner of homo economicus: How and why priming an economic schema reduces compassion. *Organizational Behavior and Human Decision Processes*, 119: 27-37.
- Moosmayer, D.C. 2012. A model of management academics' intentions to influence values. *Academy of Management Learning & Education*, 11: 155-173.
- Morrison, E. W. 1993. Longitudinal study of the effects of information seeking on newcomer socialization. *Journal of Applied Psychology*, 78(2): 173-183.
- Morrison, E. W. 2002. Newcomers' relationships: The role of social network ties during socialization. *Academy of Management Journal*, 45(6): 1149-1160.
- Moscovici, S. 1980. Toward a theory of conversion behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 13, pp. 209-239). New York: Academic Press.
- Muthén, L., & Muthén, B. (2012). Mplus user's guide (Seventh ed.). Los Angeles, CA: Muthén & Muthén.
- Newcomb, T. M. 1966. The general nature of peer group influence. In T. M. Newcomb & E. K. Wilson (Eds.), *College peer groups* (pp. 2-16). Chicago: Aldine-National Opinion Research Center.
- Parsons, T. 1967. *The structure of social action*. Glencoe: Free Press

VALUE CHANGE IN ECONOMICS EDUCATION

- Parsons, T., and Platt, G.M. 1973. *The American university*. Cambridge: Harvard University Press.
- Pascarella, E. 1985. College environment influences on learning and cognitive development: A critical review and synthesis. In J. Smart (ed.) *Higher Education: Handbook of theory and research* (Vol. 1, pp.1-64). New York: Agathon.
- Pascarella, E.T. & Terenzini, P.T. 1980. Student-faculty and student-peer relationships as mediators of the structural effects of undergraduate residence arrangement. *Journal of Educational Research*, 73(6): 344-353.
- Pascarella, E. T., & Terenzini, P. T. 2005. *How college affects students. Volume 2: A third decade of research*. San Francisco: Jossey-Bass Publishers.
- Pfeffer, J. 2005. Why do bad management theories persist? A Comment on Ghoshal. *Academy of Management Learning & Education*, 4: 96–100.
- Ratner, R.K. and Miller, D.T. 2001. The norm of self-interest and its effects on social action. *Journal of Personality and Social Psychology*, 81: 5-16.
- Reichers, A. E. 1987. An interactionist perspective on newcomer socialization rates. *Academy of Management Review*, 12(2): 278-287.
- Reis, H. T. & Wheeler, L. 1991. Studying social interaction with the Rochester Interaction Record. In P. Z. Mark (Ed.), *Advances in Experimental Social Psychology*, Vol. Volume 24: 269-318: Academic Press.
- Rice, F. P. 2001. *Human development: A life-span approach*, (2nd ed). Upper Saddle River, NJ: Prentice Hall.
- Riesman, D., Glazer, N., and Denny, R. 1970. *The lonely crowd*. New Haven: Yale University Press.
- Ritzer, G. 2011. *The McDonaldization of society*. Thousand Oaks: Pine Forge Press.
- Rokeach, M. 1973. *Nature of human values*. New York: Free Press.

VALUE CHANGE IN ECONOMICS EDUCATION

- Ross, L., Greene, D., & House, P. 1977. The “false consensus effect”: An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology*, 13: 279–301.
- Rubinstein, A. 2006. A Sceptic's comment on the study of economics. *The Economic Journal*, 116: C1-C9.
- Rutherford, M.A., Parks, L., Cavazos, D.E., & White, C.D. 2012. Business ethics as a required course: Investigating the factors impacting the decision to require ethics in the undergraduate business core curriculum. *Academy of Management Learning & Education*, 11: 174–186.
- Schwartz, S. H. (2006). A theory of cultural value orientations: Explication and applications. *Comparative Sociology*, 5: 136–182.
- Schwartz, S. H. 1992. Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (ed.) *Advances in Experimental Social Psychology*. New York: Academic Press.
- Schwartz, S. H. 1996. Values priorities and behavior: Applying of theory of integrated value systems. In C. Seligman, J. M. Olson & M. P. Zanna (Eds.), *The psychology of values: The Ontario symposium*, (Vol. 8, pp. 1–24). Hillsdale, NJ: Erlbaum.
- Schwartz, S. H., & Boehnke, K. 2004. Evaluating the structure of human values with confirmatory factor analysis, *Journal of Research in Personality*, 38: 230-255.
- Schwartz, S.H., & Rubel, T. 2005. Sex differences in value priorities: Cross-cultural and multimethod studies. *Journal of Personality and Social Psychology* 89: 1010 –1028.
- Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. 2004. The independent effects of goal contents and motives on well-being: It’s both what you do and why you do it. *Personality and Social Psychology Bulletin*, 30: 475-486.

VALUE CHANGE IN ECONOMICS EDUCATION

- Shiller, R. J. 2010. How should the financial crisis change how we teach economics? *The Journal of Economic Education*, 41: 403–409.
- Smith, A. 1759/2002. *Theory of moral sentiments*. (Ed. by K. Haakonssen). Cambridge, UK: Cambridge University Press.
- Spini, D. 2003. Measurement equivalence of 10 value types from the Schwartz value survey across 21 countries, *Journal of Cross-Cultural Psychology*, 34: 3-23.
- Srivastava, A., Locke, E. A., & Bortol, K. M. 2001. Money and subjective well-being: It's not the money, it's the motives. *Journal of Personality and Social Psychology*, 80: 959–971.
- Starkey, K., & Tempest, S. 2009. The winter of our discontent: The design challenge for business schools. *Academy of Management Learning & Education*, 8: 576–586.
- Tart, I. 2011. *Basic human values in Estonia and Baltic Sea countries*. Tartu: Tartu University Press.
- Tinto, V. 1987. *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: University of Chicago Press.
- Tversky, A. & Kahneman, D. 1973. Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 4: 207-232.
- Urbig, D. Terjesen, S., Procher, V. Muehlfeld, K., Witteloostuijn, A. (2015). Come on and take a free ride: Contributing to public goods in native and foreign language settings. *Academy of Management Learning & Education* published online before print January 8, 2015, doi:10.5465/amle.2014.0338.
- Verplanken, B., & Holland, R.W. 2002. Motivated decision making: Effects of activation and self-centrality of values on choices and behavior. *Journal of Personality and Social Psychology* 82(3): 434-447.

VALUE CHANGE IN ECONOMICS EDUCATION

- Vreeland, R., and Bidwell, C. 1965. Organizational effects on student attitudes: A study of the Harvard Houses. *Sociology of Education*, 38: 233-250.
- Wang, L., & Murnighan, J. K. 2011. On greed. *Academy of Management Annals*, 5: 279–316.
- Wang, L., Malhotra, D., & Murnighan, J.K. 2011. Economics education and greed. *Academy of Management Learning & Education*, 10: 643-60.
- Weber, M. 1949. “Objectivity” in Social Science and Policy. pp.50-112. *Max Weber. The Methodology of Social Sciences*. E.A. Shils and H.A. Finch, editors. Glencoe: Free Press.
- Weber, M. 1978. *Economy and society*. Stanford: Stanford University Press.
- Weidman, J. 1979. Nonintellective undergraduate socialization in academic departments. *The Journal of Higher Education*, 50: 48-62.
- Weidman, J. 1989. Undergraduate socialization: A conceptual approach. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 5). New York: Agathon.
- Whyte, W.H. 1957. *The organization man*. London: Jonathan Cape.
- Wilson, R.C., Gaff, J.G., Dienst, E.R., Wood, L., & Bavry, J.L. 1975. *College professors and their impact on students*. New York Wiley.
- Wright, R. E. 2010. Teaching history in business schools: An insider’s view. *Academy of Management Learning & Education*, 9: 697–700.
- Yezer, A. M., Goldfarb, R.S., & Poppen, P. J. 1996. Does studying economics discourage cooperation? Watch what we do, not what we say or how we play. *Journal of Economic Perspectives*, 10: 177-186.
- Zou, X., Tam, K., Morris, M. W., Lee, S., Lau, I. Y., & Chiu, C. 2009. Culture as common sense: Perceived consensus versus personal beliefs as mechanisms of cultural influence. *Journal of Personality and Social Psychology*, 97: 579-597.

TABLE 1. Means and Standard Deviations of Study Variables

	All programs		SSER		University of Latvia		Riga Technical University	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Sex ^a	0.70	0.46	0.53	0.50	0.77	0.42	0.84	0.37
2. Age	2.74	0.75	2.63	0.72	2.86	0.77	2.73	0.73
3. Ethnicity ^b	0.70	0.46	0.61	0.49	0.75	0.44	0.71	0.46
4. Parents' occupational status ^c	4.01	1.91	3.66	1.73	4.02	2.00	4.55	1.93
5. Family income ^d	16.65	8.90	18.93	8.79	16.80	9.31	12.97	7.20
6. Interaction with teachers	0.73	1.51	0.74	1.10	0.81	1.72	0.60	1.85
7. Residence during study ^e	1.20	0.35	0.81	0.89	1.38	1.14	1.52	1.04
8. Class attendance	4.88	1.34	5.47	1.23	4.45	1.32	4.61	1.23
9. Hours of paid work per week	9.12	12.73	3.29	5.54	13.36	15.47	11.57	12.81
10. Program normative homogeneity ^f	0.38	0.49	-	-	-	-	-	-
11. Interaction with peers	-0.05	0.61	0.18	0.63	-0.23	0.54	-0.23	0.53
12. Self-direction T1 ^g	4.80	0.76	4.82	0.76	4.77	0.80	4.81	0.69
13. Self-direction T2 ^g	4.89	0.85	4.91	0.84	4.99	0.75	4.71	0.99
14. Power T1 ^g	3.17	1.28	3.38	1.28	3.04	1.28	3.05	1.26
15. Power T2 ^g	3.61	1.22	3.85	1.28	3.50	1.13	3.36	1.18
16. Hedonism T1 ^g	4.51	1.14	4.45	1.19	4.59	1.06	4.50	1.18
17. Hedonism T2 ^g	4.94	1.07	4.93	1.09	5.10	1.07	4.75	1.03

N = 157-197 (due to missing values in demographic variables); ^a 0 = Male, 1 = Female; ^b 0 = Russian, 1 = Latvian; ^c higher score = higher occupational status; ^d higher score = higher income; ^e 0 = separate from students, 1 = together with students; ^f 0 = universities low in normative homogeneity; 1 = university high in normative homogeneity; ^g higher value score indicate greater importance.

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TABLE 2. Correlations of Study Variables

	1	2	3	4	5	6	7	8
1. Sex ^a								
2. Age	-.02							
3. Ethnicity ^b	-.04	.17*						
4. Parents' occupational status ^c	.06	-.07	-.02					
5. Family income ^d	-.17*	-.04	-.05	-.31***				
6. Interaction with teachers	-.05	.00	-.05	-.03	.10			
7. Residence during study ^e	.21***	.03	.15*	.11	-.22***	.04		
8. Class attendance	.14*	.03	-.15*	.04	-.03	-.04	-.05	
9. Hours of paid work per week	-.03	.15*	.11	-.08	-.15*	.08	.16*	-.38***
10. Program normative homogeneity ^f	-.28***	-.12	-.12	-.15*	.20**	.01	-.28***	.35***
11. Interaction with peers	.00	-.07	-.05	-.12	.11	.02	-.05	-.03
12. Self-direction T1 ^g	-.07	.01	-.04	-.08	.16*	-.08	-.01	-.08
13. Self-direction T2 ^g	-.20**	.06	.00	-.08	.15*	.03	-.11	-.11
14. Power T1 ^g	-.22***	-.01	-.10	-.12	.19**	.02	-.11	.06
15. Power T2 ^g	-.24***	-.07	-.09	-.13	.24***	-.08	-.16*	.02
16. Hedonism T1 ^g	-.12	-.06	.12	-.04	.09	-.15*	-.01	-.16*
17. Hedonism T2 ^g	-.01	-.13	.14	-.05	.05	-.18**	-.10	-.09

N = 157-197 (due to missing values in demographic variables); *p <.05, **p <.01, ***p <.001; ^a 0 = Male, 1 = Female; ^b 0 = Russian, 1 = Latvian; ^c higher score = higher occupational status; ^d higher score = higher income; ^e 0 = separate from students, 1 = together with students; ^f 0 = universities low in normative homogeneity; 1 = university high in normative homogeneity; ^g higher value score indicate greater importance.

TABLE 2. Continued

	9	10	11	12	13	14	15	16
1. Sex ^a								
2. Age								
3. Ethnicity ^b								
4. Parents' occupational status ^c								
5. Family income ^d								
6. Interaction with teachers								
7. Residence during study ^e								
8. Class attendance								
9. Hours of paid work per week								
10. Program normative homogeneity ^f	-.36***							
11. Interaction with peers	-.01	.33***						
12. Self-direction T1 ^g	-.08	.16*	.14*					
13. Self-direction T2 ^g	-.03	.17*	.06	.54***				
14. Power T1 ^g	.04	.21***	.09	.02	.01			
15. Power T2 ^g	-.14*	.26***	.13	.14	-.08	.54***		
16. Hedonism T1 ^g	.05	.03	.04	-.02	-.08	.29***	.24***	
17. Hedonism T2 ^g	.00	.08	.15*	.03	-.01	.16*	.27***	.59***

N = 157-197 (due to missing values in demographic variables); *p <.05, **p <.01, ***p <.001; ^a 0 = Male, 1 = Female; ^b 0 = Russian, 1 = Latvian; ^c higher score = higher occupational status; ^d higher score = higher income; ^e 0 = separately from students, 1 = together with students; ^f 0 = universities low in normative homogeneity; 1 = university high in normative homogeneity; ^g higher value score indicate greater importance.

TABLE 2 Moderated Hierarchical Regression Analyses Predicting Values at Time 2

	Power			Hedonism			Self-direction		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Power T1	.52 (.07)***	.51 (.08)***	.53 (.08)***	--	--	--	--	--	--
Hedonism T1	--	--	--	.58 (.07)***	.56 (.07)***	.58 (.07)***	--	--	--
Self-direction T1	--	--	--	--	--	--	.46 (.08)***	.45 (.09)***	.44 (.08)***
Sex	-.04 (.22)	-.03 (.23)	-.03 (.23)	-.01 (.18)	.00 (.19)	.00 (.18)	-.13 (.14)	-.12 (.15)	.12 (.14)
Age	.03 (.11)	.06 (.11)	.06 (.11)	.00 (.09)	.02 (.09)	.02 (.09)	-.02 (.07)	.00 (.07)	-.01 (.07)
Ethnicity	.04 (.18)	.03 (.19)	.03 (.18)	.17 (.14)*	.15 (.15)'	.14 (.15)	.03 (.11)	.02 (.12)	.03 (.11)
Parents' occupational status	-.10 (.04)	-.10 (.04)	-.11 (.04)	.01 (.03)	.01 (.04)	.00 (.04)	.07 (.03)	.07 (.03)	.08 (.03)
Family income	.03 (.01)	.03 (.01)	-.01 (.01)	-.11 (.01)	-.11 (.01)	-.15 (.01)'	.13 (.01)	.13 (.01)	.18 (.01)*
Program normative homogeneity	.23 (.20)*	.21 (.24)*	.22 (.24)*	.09 (.16)	.11 (.19)	.13 (.19)	.04 (.13)	.08 (.15)	.04 (.15)
Interaction with peers		.09 (.15)	.10 (.15)		.07 (.12)	.08 (.12)		-.03 (.10)	-.04 (.09)
Interaction with teachers		-.03 (.21)	-.03 (.21)		-.03 (.17)	-.03 (.16)		.02 (.13)	.02 (.13)
Residence during study		-.04 (.09)	-.05 (.09)		-.01 (.07)	-.02 (.07)		.02 (.06)	.04 (.06)
Class attendance		-.09 (.08)	-.09 (.08)		-.07 (.07)	-.07 (.06)		-.08 (.05)	-.08 (.05)
Hours of paid work		-.10 (.01)	-.11 (.01)		-.02 (.01)	-.03 (.01)		-.02 (.01)	.00 (.01)
Program normative homogeneity x Interaction with peers			.13(.32)'			.16(.25)*			-.24(.20)**
R ²	.45	.47	.49	.39	.40	.42	.29	.29	.35
F	13.65***	8.34***	8.14***	10.79***	6.27***	6.31***	6.73***	3.88***	4.53***
ΔR ²	.42	.41	.43	.35	.34	.36	.24	.22	.27

N = 157 (due to missing values in demographic variables); ' p < .07, *p < .05, **p < .01, ***p < .001; Standardized regression coefficients (standard errors in parentheses).

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TABLE 3 Binary Logistic Regression Analyses Predicting Program Normative Homogeneity (Enrollment in SSER vs. in University Business Schools)

	Wald statistic (S.E. in parentheses)
Power T1	1.17 (.19)
Hedonism T1	1.25 (.22)
Self-direction T1	0.92 (.32)
Sex	16.53 (.48)***
Age	2.34 (.28)
Ethnicity	2.45 (.46)
Parents' occupational status	3.16 (.12)
Family income	2.67 (.03)
Cox & Snell R ²	.27
Nagelkerke R ²	.37

N = 157 (due to missing values in demographic variables); ' p < .07, *p < .05, **p < .01., ***p < .001.

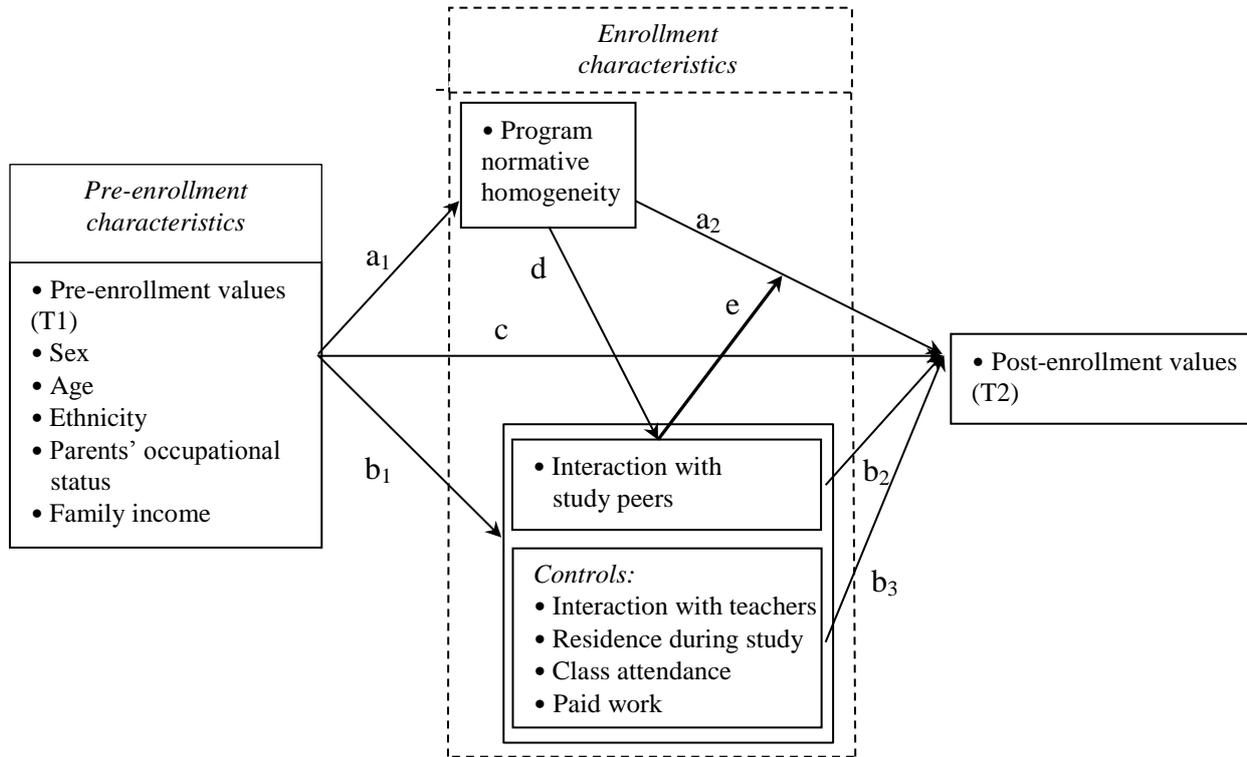
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TABLE 4 Regression Analyses Predicting Peer Interaction

	Peer interaction	
	OLS regression	
	(β, SE in parentheses)	
	Step 1	Step 2
Power T1	.10 (.04)	.07 (.04)
Hedonism T1	.10 (.04)	.10 (.04)
Self-direction T1	.05 (.06)	.03 (.06)
Sex	.09 (.09)	.13 (.10)
Age	-.13 (.05)	-.11 (.05)
Ethnicity	-.01 (.09)	.01 (.09)
Parents' occupational status	-.14 (.02)	-.11 (.02)
Family income	-.01 (.00)	-.03 (.00)
Program normative homogeneity (SSER vs. university business school)		.23 (.09)**
R ²	.07	.10
F	1.41	2.12**
ΔR ²	.02	.06

N = 157 (due to missing values in demographic variables); ' p < .07, *p < .05, **p < .01., ***p < .001.

FIGURE 1. Model of academic value socialization



ENDNOTES

¹ Frank et al. (1993) measured students' self-interest using the responses to two scenarios of an "honesty survey". In the first scenario, "the owner of a small business is shipped ten microcomputers but is billed for one". Students were asked to indicate "whether the owner will inform the computer company of the error". In addition to estimating the likelihood that the mistake would be pointed out by the owner, students were also asked to indicate their own preferred mode of conduct if they were the owner of the company. In the second scenario, students were asked to indicate whether "a lost envelope containing \$100 and bearing the owners name on it is likely to be returned by the person who finds it" (p.168). Students were asked to estimate the likelihood that the envelope would be returned if they themselves had lost it, and whether they themselves would return it.

² John Stuart Mill used Bentham's hedonistic maximization doctrine in his conceptualization of the values of homo economicus (Drakopoulos, 1991). Early marginalist economists subsequently incorporated the principles of hedonistic maximization in their marginal utility theory. Jevons (1871: 44), for example, recognized that "pleasure and pain are undoubtedly the ultimate objects of the calculus of Economy". With the formalization of economic theory in the twentieth century the focus on hedonistic maximization was gradually replaced with the allegedly more value-neutral concepts of utility or satisfaction, yet the concern with maximization of pleasure remained the core motive underlying economically rational action (Becker, 1976; Lewin, 1996).

³ A longitudinal regression design with the value change scores as the criterion yielded similar results. Controlling for students' pre-enrollment and enrollment characteristics, the interaction effects of program normative homogeneity and peer interaction were significant for the measures of the change in power ($\beta = .25, p < .05$), hedonism ($\beta = .31, p < .01$), and self-direction ($\beta = -.27, p < .01$).