

Why Neoliberal Values of Self-Enhancement Lead to Cheating in Higher Education: A Motivational Account

Psychological Science 24(11) 2153–2162 © The Author(s) 2013 Reprints and permissions: sagepub.com/journalsPermissions.nav DOI: 10.1177/0956797613487221 pss.sagepub.com



Caroline Pulfrey and Fabrizio Butera

Institut des Sciences Sociales, University of Lausanne

Abstract

The significant number of financial and academic frauds hitting the headlines is paralleled by high rates of cheating in schools. Does adherence to the neoliberal values that underpin our economic and academic systems predict acceptance of cheating? Four studies revealed that adherence to neoliberal values of self-enhancement—power and achievement—predicts the motivation to gain social approval; this motivation, in turn, favors the adoption of context-specific competitive performance-approach goals, which predict the condoning of cheating. An experimental study showed that when participants were exposed to a source promoting the values of universalism and benevolence (self-transcendence values, the normative opposite of self-enhancement values), self-enhancement adherence ceased to predict the condoning of cheating. Most important, a classroom-based study addressed the core question of cheating behavior, revealing that adherence to self-enhancement values indeed predicted actual cheating behavior. These results point to the relevance of diagnosing societal values as social causes of cheating.

Keywords

neoliberal values, self-enhancement values, social approval, performance-approach goals, cheating, antisocial behavior, goals, motivation, values

Received 1/26/13; Revision accepted 3/29/13

As corporate and financial frauds have become regular fodder for the press since the drama of the financial crisis (Wolf, 2012), the academic world has not escaped scandal, with a number of data-fraud cases hitting the headlines (Eserink, 2012; Normille, 2012). Parallel to this, cheating in schools and universities is increasingly prevalent. According to a U.S. survey (McCabe, Treviño, & Butterfield, 2001), more than 75% of college students are likely to have cheated, and, in an international survey of college students from 21 countries, more than 90% of the respondents reported having observed others cheating (Teixeira & Rocha, 2010). Why might this be?

Although some economists (Boone & Johnson, 2010; Chang, 2001) have associated unethical business practices with the core principles underlying the neoliberal form of capitalism that is now dominant in the world economy (United Nations Conference on Trade and Development, 2012), there is a dearth of psychological research looking to values as potential causes of cheating. Yet values constitute the ultimate lynchpin between

societal macro-ideology and individual life goals (Kasser, Vansteenkiste, & Deckop, 2006), which are transmitted via the social institutions—such as educational, legal, and financial institutions—that propagate them. On the level of the individual, these higher-order life goals drive contextually specific motivations, goals, and attitudes (Schwartz, 2006). Consequently, our aim in this research was to determine whether there is any relation between cheating and individual adherence to neoliberal values, within the context of a fundamental social institution—that of higher education. Educational institutions are particularly relevant social settings because education constitutes a training for society (Deutsch, 1979), and research has shown that academic dishonesty among students is robustly associated with their attitudes toward

Corresponding Author:

Fabrizio Butera, Institut des Sciences Sociales, University of Lausanne, Lausanne 1015, Switzerland E-mail: fabrizio.butera@unil.ch

professional dishonesty (Lawson, 2004) and the degree to which they imagine engaging in rule or norm violation in business or society in the near future (Lovett-Hooper, Weston, & Dollinger, 2007). So what, precisely, are neoliberal values, and how might they engender a tendency to condone cheating?

Societal Values, Individual Values, and Motivation

According to Kasser, Cohn, Kanner, and Ryan (2007), the three root values of self-interest, desire for material goods to consume, and individual competition underpin the ideology of neoliberal capitalism. Indeed, in a crossnational study of 20 member countries of the Organisation for Economic Co-operation and Development, Schwartz showed that the degree to which a country pursues neoliberal, free-market capitalism (as opposed to coordinated-market capitalism) correlates positively with national aggregates of individual-level adherence to selfenhancement values—namely, the desire for personal success attained through normative competence, and power, that is, control over resources and people (Schwartz, 2007). Note that Schwartz (2007, p. 52) established the parallel between self-enhancement values and, specifically, this "most extreme form of competitive capitalism . . . a polar type on a continuum of capitalisms," which is comparable to Friedman and Friedman's (1962) vision of a neoliberal, free-market economy.

Attaining achievement and power is intricately bound with obtaining the admiration and approval of other people (Grouzet et al., 2005). Achievement generates social approval, and social approval is necessary to attain power. Indeed, Schwartz (2007), in conceptualizing achievement as personal success via the demonstration of normative competence, argued that people endorse achievement values with a view to obtaining the admiration and approval of other people.

Within the educational system, a context of normative achievement, for those who adhere to a self-enhancement value system focused on normative and social prestige, social approval is most likely to be garnered by

outperforming other students; Elliot (1999) termed this type of achievement goal *performance-approach goals*. Elliot and Moller (2003) argued that self-presentation, validation, and ego protection are likely to underpin performance-approach goals because feedback on personal competence is furnished by others, is often highly diagnostic, and is publicly available. A review of performance-goal antecedents and consequences (Moller & Elliot, 2006) documented that, in effect, several factors related to social approval are antecedents of the adoption of performance-approach goals.

Consequently, we first hypothesized that adherence by students to self-enhancement values would predict the motivation to study to gain social approval, and that this would predict performance-approach goals (Elliot & Murayama, 2008). Two preliminary studies conducted with higher-education business and science students (Study S1: N = 623; Study S2: N = 722) provided evidence that the more students adhered to self-enhancement values, the more they endorsed performance-approach goals, a relation that was mediated by motivation to study to attain social approval (for details and results, see Study S1 and Study S2 in the Supplemental Material available online).

A Hierarchical Model of Motivations Leading to Cheating

We then developed a hierarchical motivational model, depicted in Figure 1, and our second hypothesis predicted a sequential mediation of the direct relation between adherence to self-enhancement values and the condoning of cheating, including both the motivation to gain social approval and the adoption of performance-approach goals as mediators.

Support for our hypothesis that adherence to self-enhancement values predicts cheating has come from prior research revealing that desire for professional success constitutes a driving force behind cheating (Davy, Kincaid, Smith, & Trawick, 2007) and that a focus on materialistic values is related to ethical problems, such as less caring treatment of others (Kasser et al., 2006). As

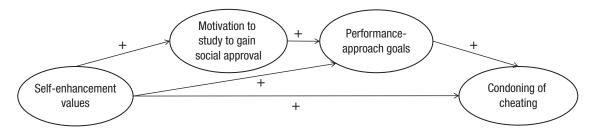


Fig. 1. Model of the indirect and direct effects of adherence to self-enhancement values on the condoning of cheating. Plus signs signify positive relationships.

Kasser et al. (2007) claimed, the "winner-takes-all" mentality, characterized by the promotion of self-interest and the attachment of self-worth to material success, leads to a tendency whereby people form exchange-based relationships and objectify others, judging them in terms of their potential usefulness. Corollary to this, Schwartz (1996) provided evidence that power and achievement values were negatively correlated with cooperation in the context of a money-sharing game, and other findings have linked the endorsement of materialistic values to greater Machiavellianism (i.e., distrust, egocentricity, and propensity for interpersonal manipulation; McHoskey, 1999). All of these factors may be associated with cheating, because cheating favors the cheater at the expense of his or her peers.

As for the possible motivational path linking selfenhancement values and the condoning of cheating, we have argued in the previous section for a path leading from self-enhancement values to social-approval-related motivation and then to performance-approach goalsand the results from our two preliminary studies supported this argument (see Study S1 and Study S2 in the Supplemental Material). In addition, research has shown that study-specific goals of doing better than other students (i.e., performance-approach goals) are related to cheating (Anderman & Danner, 2008). Experimental work (Murdock, Miller, & Goetzinger, 2007) has also indicated a relationship between performance-oriented classrooms and the perceived justifiability of cheating. This ties in with the results of a meta-analysis of determinants of cheating among college students (Whitley, 1998), which found that the greater the degree of perceived competition, and the greater the reward for success, the more students admitted to cheating in their studies. In line with these findings, a third preliminary study (N =236) showed that the more students adhered to selfenhancement values, the more they condoned cheating, a relation that was mediated by the endorsement of performance-approach goals. (See Study S3 and Table S1 in the Supplemental Material.)

Study 1

The aim of Study 1 was to test the full path model, in which we hypothesized a two-stage indirect relation between self-enhancement-value adherence and the condoning of cheating—that is, the viewing of cheating as relatively normative (Jordan, 2001) and acceptable (Bronzaft, Stuart, & Blum, 1973; Miller, Gordon, & Buddie, 1999)—with greater endorsement of self-enhancement values predicting higher levels of motivation to study to gain social approval, such motivation predicting higher levels of study-related performance-approach goal adoption, and such goal adoption predicting greater condoning of cheating.

Method

Participants were 470 higher-education students in an international management school based in Switzerland (mean age = 21.65 years, SD = 2.23; 218 men, 246 women, 6 participants who did not report their gender). The students voluntarily completed questionnaires either in class or during their free time. The students' values were measured using a 33-item adapted version of the Portrait Values Questionnaire (Schwartz et al., 2001), which included scales of items for four value types: selfenhancement, self-transcendence, openness to change, and conservation. To obtain measures of individual-level prioritization of self-enhancement values, including the values of achievement and power but not hedonism, relative to the other types of values, we calculated each individual's average score for all values and then subtracted his or her average score for all values from his or her average score for self-enhancement values (Schwartz, 2006). The following items measured self-enhancement values: "It is important to me to do better than others" (SE1 in Fig. 2); "It is important to me to be rich" (SE2); "It is important to me to be ambitious" (SE3); "It is important to me to show my abilities" (SE4); "It is important to me to be successful" (SE5); "It is important to me to be the one who makes decisions/leads" (SE6; $\alpha = .73$). Although our focus in this article is on self-enhancement values, for interested readers we have provided the correlations between relative adherence to each value type and the dependent variable of the three main studies and Study S3 in Table S2 in the Supplemental Material.

A scale of controlled motivation with introjected regulation (Ryan & Connell, 1989), which assessed participants' motivation to study to gain social approval came next. The scale consisted of the following five items: "I study because I want others to think I'm competent" (IJ1 in Fig. 2); "I study because I want the teacher to think I'm a good student" (IJ2); "I study because I'd feel bad if I didn't" (IJ3); "I study because I'd feel guilty if I didn't" (IJ4); and "I study because I want people to have a good opinion of me" (IJ5; $\alpha = .82$). This measure was followed by a scale of study-related performance-approach goals (Elliot & McGregor, 2001), which was adapted to coursework level. The scale consisted of the following three items: "My goal is to perform better than the other students" (PA1 in Fig. 2); "My aim is to perform well relative to other students" (PA2); and "I try to do well compared to other students" (PA3; $\alpha = .87$).

Finally, participants completed a four-item scale of condoning of cheating. Students were asked about copying, a behavior central to academic cheating (Teixeira & Rocha, 2010), and obtaining external aid on academic work (McCabe & Treviño, 1997; Rettinger, Jordan, & Peschiera, 2004). The scale consisted of four items, two of which were adapted from Murdock et al.'s (2007)

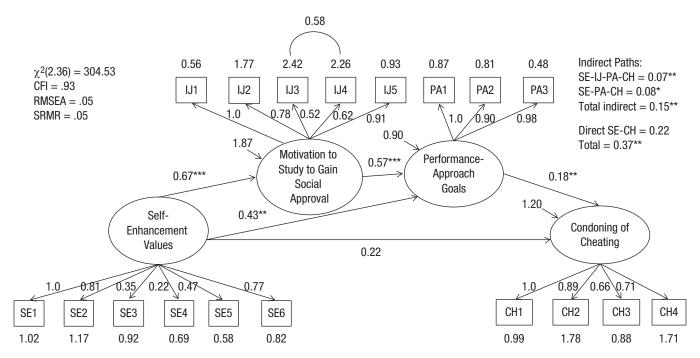


Fig. 2. Results of Study 1: measurement model and path diagram showing the indirect and direct effects of adherence to self-enhancement (SE) values on the condoning of cheating (CH). Mediators were introjected regulation (IJ; motivation to study to gain social approval) and performance-approach (PA) goals. All values are unstandardized coefficients. All factor loadings are significant (p < .01). Asterisks indicate significant paths (*p < .05; **p < .01; ***p < .001). CFI = comparative fit index, RMSEA = root-mean-square error of approximation, SRMR = standardized root-mean-square residual. For the specific measures used, see the text.

justifiability-of-cheating scale, relating to the condoning of cheating: "I can imagine that some students might copy off the Internet without citing" (CH1 in Fig. 2); "I can understand it if some students copy off others" (CH2); "Some students probably get external help for their coursework" (CH3); and "Getting outside help to do coursework is no big deal" (CH4). Responses were made using scales from 1, *totally disagree*, to 7, *totally agree* (α = .72). A structural equation model (SEM) with these variables satisfied the fit criteria, $\chi^2(129, N = 470) = 303.93$, p < .001, mean-square = 2.37, comparative-fit index (CFI) = .93, Tucker-Lewis index (TLI) = 0.93, root-mean-square error of approximation (RMSEA) = .05, standardized root mean squared residual (SRMR) = .05.

Results and discussion

A full structural equation path model satisfied the fit criteria, $\chi^2(129, N=470)=304.53$, p<.001, mean-square = 2.36, CFI = .93, TLI = 0.93, RMSEA = .05, SRMR = .05. All parts of the full indirect path, including introjected regulation and performance-approach goals, were significant, and the direct effect of self-enhancement values on the condoning of cheating was not significant, b=0.22, F(1,468)=2.56, n.s., indicating a full mediation. Results are displayed in Figure 2.

These results indicate that adherence to self-enhancement values does indeed predict the condoning of cheating and that this relation is mediated by a motivational path mechanism, whereby self-enhancement values predict the motivation to study to gain social approval, such motivation predicts the adoption of study-related performance-approach goals, and such goals predict the condoning of cheating. More generally, the results allow for a more cohesive understanding of the motivational mechanism that underpins the tendency to accept cheating as a means of succeeding.

This model is based on an important assumption: that individual values, the product of internalized, socialized cultural-level values, are not only akin to but the result of a societal ideology, transmitted via social institutions such as school (Bourdieu, 1975). Given that the molding of life values is a gradual, iterative process (Schwartz, 1992), exposure to normative messages and espoused institutional values might have the potential to influence value-related attitudes (Maio, Pakizeh, Cheung, & Rees, 2009). Indeed, a number of theoretical models, including the situational-individual model (Trevino, 1986), the contingency framework (Ferrell & Gresham, 1985) and the behavioral model of ethical and unethical decision making (Brommer, Gratto, Gravander, & Tuttle, 1987), indicate that ethics-related decision making is the product of

an interaction between personal characteristics, such as individual values, and the social and institutional environment in which the individual is situated. This would imply that, for individuals who adhere to selfenhancement values, whereas a context that emphasizes these values will maintain or reinforce the tendency to condone cheating, a context that focuses on values that are diametrically opposed to self-enhancement values namely, self-transcendence values, such as universalism and benevolence, which prioritize the well-being of others (Schwartz, 1992)—might counteract this pre-existing tendency. Indeed, research revealing lower levels of cheating in honor-code institutions, which actively promote values of trust, mutual respect, community, and egalitarian processes (McCabe, Treviño, & Butterfield, 1999), hints at the potential of institutional culture to attenuate the results of earlier socialization patterns and of the pressures of society at large. In Study 2, using an experimental manipulation of value-rich communications from a normatively salient source, we tested this interaction hypothesis, predicting that whereas the degree of adherence to self-enhancement values would positively predict cheating in a context in which these values were promoted by a highly prestigious source, it would cease to do so in a context in which the same source promoted opposing self-transcendence values.

Study 2

Method

Participants were 502 students attending a highereducation international management school Switzerland (mean age = 21.15 years, SD = 2.36; 243 men, 251 women, 8 participants who did not report their gender). In addition to measuring relative adherence to selfenhancement values ($\alpha = .74$) and the condoning of cheating (explaining 46.78% of the variance in a confirmatory factor analysis; $\alpha = .61$) as in Study 1, we included in the questionnaire one of two experimental inductions, which followed the individual-values scales and preceded the condoning-of-cheating scale. In both conditions, participants were instructed to read an extract from a lecture ostensibly given by a Nobel-prize winner in economic sciences to business-school students on the subject of what makes a good career. The structure of both speeches was identical, but in the *self-enhancement* condition (n =262), the speech was rich with terms extracted from Schwartz's (2006) definition of self-enhancement (such terms are italicized here for emphasis):

One's conception of the good economy depends upon one's conception of the good life. . . . I propose that a career of *achievement* and *power* are

at the heart of a good life. Being *ambitious*, *influential*, and of course *successful* are what count in today's world. Enjoying *social power*, *authority*, and *wealth* enable one to maintain a *positive public image* and gain *social recognition*. . . . In the same way, an economy based on *personal ambition* and *achievement* is a truly good economy.

In the *self-transcendence* condition (n = 240) the speech was rich with terms extracted from Schwartz' definition of self-transcendence (such terms are italicized for emphasis):

One's conception of the good economy depends upon one's conception of the good life. . . . I propose that a career of *helping others* and *protecting the environment* are at the heart of a good life. Being *honest, loyal*, and of course *broad-minded* are what count in today's world. Working for *social justice, equality*, and *responsible management* enable one to gain *wisdom* and work towards *a world of beauty*. . . . In the same way, an economy based on *equality* and *peace* is a truly good economy.

Results and discussion

Multiple regression analyses using the Hayes PROCESS macro (Model 1; Hayes, 2013) were implemented to test the effect of degree of endorsement of selfenhancement values in interaction with the experimental value manipulation—namely, exposure to promotion of self-enhancement values versus self-transcendence values—on the condoning of cheating. Our regression model included adherence to self-enhancement values (centered), the value manipulation (self-enhancement, coded -.5, vs. self-transcendence, coded .5), and the interaction between the two terms. Although neither the value manipulation, b = -0.06, F(1, 499) = 0.49, n.s., nor adherence to self-enhancement values, b = 0.12, F(1, 499) = 2.31, n.s., produced a main effect on condoning of cheating, the predicted interaction between selfenhancement values and the value manipulation was significant, b = -0.36, F(1, 499) = 5.29, p < .05, $\eta_p^2 = .01$. Inspection of the simple effects revealed that selfenhancement values significantly predicted greater condoning of cheating in the self-enhancement condition, b = 0.30, F(1, 499) = 8.55, p < .01, $\eta_p^2 = .01$, but not in the self-transcendence condition, b = -0.06, F(1, 499) = 0.27, n.s. The conditional effect of the value promotion on condoning of cheating was significant for participants with a high degree of adherence to self-enhancement values (scores 1 SD above the mean), b = -0.26, F(1, 499) = 4.49, p < .05, which implies that such participants condoned cheating less in the self-transcendence

condition than in the self-enhancement condition, and was not significant for participants with a low degree of adherence to self-enhancement values (scores 1 SD below the mean), b = 0.14, F(1, 499) = 1.32, n.s. (cf. Fig. 3).

This interaction between adherence to self-enhancement values and the value manipulation indicates that the communication of self-transcendence values by a normatively salient source has the potential to attenuate the relationship between adherence to self-enhancement values and the condoning of cheating. Furthermore, it points to the potential of communication interventions that confront students socialized to endorse self-enhancement values with opposing worldviews to attenuate the relationship between the endorsement of self-enhancement values and the normative condoning of cheating. Interestingly, this result provides experimental support for findings from McCabe et al.'s (1999) qualitative analysis on the power of honor codes to attenuate positive attitudes toward cheating.

In Studies 1 and 2, our focus was on understanding the motivational and contextual factors that drive attitudes toward cheating. Although research has shown attitudes toward cheating to be significantly related to cheating behavior (Jordan, 2001; Whitley, 1998), inevitably, the attitude-behavior relationship cannot be taken for granted (Ajzen & Fishbein, 2005). Consequently, the most important question still remained open: Does adherence

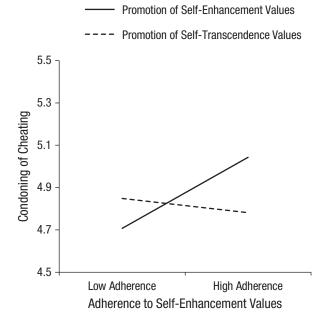


Fig. 3. Results of Study 2: condoning of cheating as a function of degree of adherence to self-enhancement values and condition. Values for low and high adherence to self-enhancement values were 1 standard deviation below and above the mean, respectively. Possible scores for condoning of cheating ranged from 1 to 7, with higher scores indicating greater condonation.

to self-enhancement values actually predict cheating behavior?

Study 3

Method

Participants were 130 students (mean age = 21.66 years, SD = 2.71; 55 men, 75 women) attending an international management school in Switzerland. Participants were presented with two allegedly separate studies by a visiting researcher. The first study used the same values questionnaire used in Studies 1 and 2 and was presented as part of a larger study measuring management students' life values. The second study was presented as a diagnostic problem-solving test emanating from a different research department. As part of the cover story, students read a short extract from an article emphasizing the importance of focusing on problem-solving skills in business schools (Flynn, Reichard, & Slane, 1987).

Students were told that they would have 10 min to solve six problems requiring the drawing of geometric figures without lifting their pencil off the paper and without retracing any line, and that a ranked list of their scores would be provided to their teacher, who would communicate the scores to them and post the list in their next class (Lobel & Levanon, 1988). Three of the problems were solvable, but the other three were not, even though the figures ostensibly looked no more complicated than the solvable ones (Fig. 4). Participants were given a space to practice their drawings in and a box below it in which they were instructed to draw their solution only if they had succeeded in solving the problem. The final page featured six questions asking participants to indicate for each puzzle whether they had solved it by ticking one of two boxes ("yes" or "no"). Students were debriefed once all of the data had been collected. Cheating was calculated using a count of the number of times participants "solved" at least one of the three impossible problems and claimed that they had solved the puzzle. Among the sample as a whole, 12.4% of participants cheated.

Results and discussion

As is typically done in studies on actual deviant behavior in which there is a relatively high incidence of zero counts of the behavior in question (Osgood, 2000), Poisson regression analyses (King, 1988) featuring robust standard errors to control for violation of the assumption that dependent-variable variance equals its mean (Cameron & Trivedi, 2009) were used to test the effect of degree of endorsement of self-enhancement values on

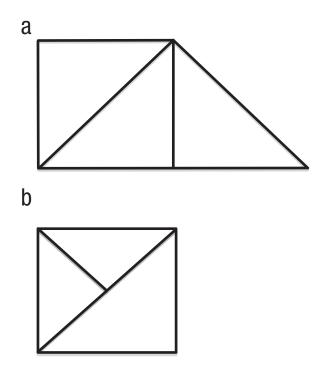


Fig. 4. Example exercises from Study 3: a solvable puzzle (a) and an unsolvable puzzle (b).

cheating behavior. Results indicated that adherence to self-enhancement values significantly predicted cheating, b = 1.00, SE = 0.45, Wald $\chi^2(1, N = 129) = 5.00$, p < .05 (Fig. 5).

This straightforward prediction of cheating behavior by adherence to self-enhancement values significantly reinforces the findings of the previous studies, revealing a direct relation between adherence to these values of achievement and power and not simply condoning cheating but also, more importantly, actually committing

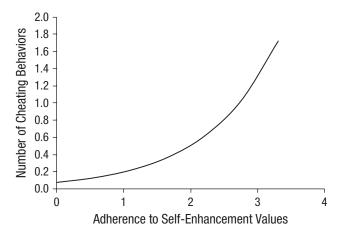


Fig. 5. Poisson regression results of Study 3: mean number of cheating behaviors (on a scale from 1 to 6) as a function of adherence to self-enhancement values.

the act in a specific situation in which normative success is salient.

General Discussion

This research provides three potentially significant contributions to the literature on values, motivation, and cheating. The first and most noteworthy finding is that it establishes for the first time a direct relation between adherence to individual-level self-enhancing values of power and personal success—the correlates of neoliberal, free-market capitalism (Schwartz, 2007)—and both condoning of cheating and engagement in cheating behavior. These findings open the way to a new approach to the study of cheating, in that they exemplify at an institutional and psychological level the sociological model of Robert Merton (1938), who argued that "the cultural exaggeration of the success goal . . . and the extreme emphasis upon the accumulation of wealth as a symbol of success in our society" (p. 675), combined with the restricted access to wealth- and status-generating professional opportunities that is also characteristic of our society, are main factors jointly responsible for engendering deviant behavior. This is because the imperative to compete is an inevitable consequence of the co-existence of these two social phenomena, and in a context of competition for high-stakes material resources, the focus can end up being less on the game than on the outcome. Consequently, in a social context that prioritizes materialistic success and status, as is particularly the case in business and management studies (Kasser & Ahuvia, 2002), students may see survival "by whatever means necessary" as their number-one priority (Dalton, 1998, p. 13, cited by Gallant & Drinan, 2006). Harvey and Sims (1978) echoed this point, arguing that, as focus on material success intensifies, unethical behavior increases via the rationalization that the end justifies the means.

Second, this research supports a hierarchical motivational model describing a motivational pathway between neoliberal life goals and the condoning of cheating, which operates via the drive to work in order to gain social approval and the consequent adoption of performance-approach goals. One original feature of this model is that it provides an insight into the role of the pressure to compete and win, conceptualized by controlled, social-approval-focused motivation, which predicts performance-approach goals. Elliot and Moller (2003) picked up on precisely this point when they distinguished between the inherent human tendency to attain normative competence and socialized pressure to outperform others based on a disproportionate valuing of normative competence; the researchers argued that such pressure "often sullies these goals, by distorting them into tools for demonstrating positive characteristics,

pleasing others, and validating one's worth, rather than tools for acquiring competence information per se" (p. 345). Furthermore, the model represents an individual-level equivalent of the claims Kasser et al. (2007) have made against neoliberal, capitalist societal values, namely that adherence to such values generates pressure among individuals to outperform others, given that that is the way to attain social approval and resultant feelings of self-worth.

Third, the results of Study 2 indicate that exposure to communications expressing self-transcendence values from normatively salient sources does have the potential to attenuate the association between adherence to selfenhancement values and the acceptance of cheating as a means to succeed. These results contribute to the literature on social influences on unethical behaviors, particularly research emphasizing the power of the immediate social context to affect recourse to unethical attitudes and behaviors. Harvey and Sims (1978) found that rewarding unethical decision making led to increases in it, which implies that people can indeed be conditioned in terms of moral choices. More recently, Harding, Carpenter, Finelli, and Passow (2004) found that one of the most commonly reported sources of pressure to cheat and to violate workplace policies was perceived norms. Within this framework, our findings provide sound empirical support for Anderman et al.'s (1998) recommendations to change external goalrelated stresses as a way to reduce cheating-Anderman et al. argued that if the school environment does not emphasize competition and success "at all costs," then students may be less motivated to cheat (p. 90).

Understanding more about the life goals that induce cheating and the contextual influences that enhance or suppress this tendency is undeniably useful at a time when scandals in academia, business, and politics (Rhee, 2009; Tumber, 2004; Vogel, 2012) are regular events, especially given that results from more than one study (Harding et al., 2004; Nonis & Swift, 2001; Sims, 1993) have revealed that self-reported acts of academic dishonesty are significantly correlated with self-reported norm and rule violation in the workplace. Stricter regulation in social institutions may stem the flow of such events, but this research suggests that their prevention may effectively be informed by a diagnosis both of the values that individual people hold dear and of those transmitted within our social institutions.

Author Contributions

Both authors contributed extensively to the work presented in this article.

Acknowledgments

We wish to thank Alain Clémence, Franciska Krings, Gabriel Mugny, Philippe Sarrazin, and Nicolas Sommet for valuable comments and the students at Les Roches School and l'École

Polytechnique Fédérale de Lausanne for their help with data collection.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Funding

This work was supported by the Swiss National Science Foundation. Part of this work was conducted during C. Pulfrey's doctoral thesis under the supervision of F. Butera.

Supplemental Material

Additional supporting information may be found at http://pss .sagepub.com/content/by/supplemental-data

References

- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The bandbook of attitudes* (pp. 173–221). Mahwah, NJ: Erlbaum.
- Anderman, E. M., & Danner, F. (2008). Achievement goals and academic cheating. *International Review of Social Psychology*, 21, 155–180.
- Boone, P., & Johnson, S. (2010). Will the politics of global moral hazard sink us again? In *The future of finance: The LSE report* (pp. 247–288). London School of Economics and Political Science. Retrieved from http://harr123et.files.wordpress.com/2010/07/futureoffinance5.pdf
- Bourdieu, P. (1975). *Cultural reproduction and social reproduction: Studies in the learning sciences*. Paris, France: OECD.
- Brommer, M., Gratto, C., Gravander, J., & Tuttle, M. (1987). A behavioral model of ethical and unethical decision making. *Journal of Business Ethics*, 6, 265–280.
- Bronzaft, A. L., Stuart, I. R., & Blum, B. (1973). Test anxiety and cheating on college examinations. *Psychological Reports*, *32*, 149–150.
- Cameron, A. C., & Trivedi, P. K. (2009). Microeconometrics using Stata. College Station, TX: Stata Press.
- Chang, H.-J. (2001). Breaking the mould: An institutionalist political economy alternative to the neo-liberal theory of the market and the State (Social Policy and Development Programme Paper, Number 6). United Nations Research Institute for Social Development. Retrieved from http://www.unrisd.org/unrisd/website/document.nsf/0/44552a49 1d461d0180256b5e003cafcc/\$file/chang.pdf
- Davy, J. A., Kincaid, J. F., Smith, K. J., & Trawick, M. A. (2007). An examination of the role of attitudinal characteristics and motivation on the cheating behavior of business students. *Ethics & Behavior*, *17*, 281–302.
- Deutsch, M. (1979). Education and distributive justice: Some reflections on grading systems. *American Psychologist*, 34, 391–401.
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, *34*, 169–189.
- Elliot, A. J., & McGregor, H. A. (2001). A 2 × 2 achievement goal framework. *Journal of Personality and Social Psychology*, 80, 501–519.

- Elliot, A. J., & Moller, A. (2003). Performance-approach goals: Good or bad forms of regulation? *International Journal of Educational Research*, 39, 339–356.
- Elliot, A. J., & Murayama, K. (2008). On the measurement of achievement goals: Critique, illustration, and application. *Journal of Educational Psychology*, *3*, 613–628.
- Eserink, M. (2012, October 2). Diederik Stapel under investigation by Dutch prosecutors. *Science Insider*. Retrieved from http://news.sciencemag.org/scienceinsider/2012/10/diederik-stapel-under-investigat.html
- Ferrell, O. C., & Gresham, L. G. (1985). A contingency framework for understanding ethical decision making in marketing. *Journal of Marketing*, 49, 87–96.
- Flynn, S., Reichard, M., & Slane, S. (1987). Cheating as a function of task outcome and Machiavellianism. *Journal of Psychology*, 121, 423–427.
- Friedman, M., & Friedman, R. D. (1962). *Capitalism and free-dom*. Chicago, IL: University of Chicago Press.
- Gallant, B. T., & Drinan, P. (2006). Organizational theory and student cheating: Explanations, responses and strategies. *The Journal of Higher Education*, 77, 839–860.
- Grouzet, F. M. E., Kasser, T., Ahuvia, A., Fernandez-Dols, J. M., Kim, Y., Lau, S., . . . Sheldon, K. (2005). The structure of goal contents across 15 cultures. *Journal of Personality and Social Psychology*, 89, 800–816.
- Harding, T. S., Carpenter, D. D., Finelli, C. J., & Passow, H. J. (2004). Does academic dishonesty relate to unethical behavior in professional practice? An exploratory study. *Science and Engineering Ethics*, 10, 311–324.
- Harvey, H. W., & Sims, H. P., Jr. (1978). Organizational philosophy, politics, and objectives related to unethical decision behavior: A laboratory experiment. *Journal of Applied Psychology*, 64, 331–338.
- Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis. New York, NY: Guilford Press.
- Jordan, A. E. (2001). College student cheating: The role of motivation, perceived norms, attitudes, and knowledge of institutional policy. *Ethics & Behavior*, 11, 233–247.
- Kasser, T., & Ahuvia, A. C. (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.
- King, G. (1988). Statistical models for political science event counts: Bias in conventional procedures and evidence for the exponential Poisson regression model. *American Journal of Political Science*, 32, 838–863.
- Lawson, R. (2004). Is classroom cheating related to business students' propensity to cheat in the "real world"? *Journal of Business Ethics*, 49, 189–199.

- Lobel, T. E., & Levanon, I. (1988). Self-esteem, need for approval, and cheating behavior in children. *Journal of Educational Psychology*, 80, 122–123.
- Lovett-Hooper, G., Weston, R. M. K., & Dollinger, S. J. (2007). Is plagiarism a forerunner of other deviance? Imagined futures of academically dishonest students. *Ethics & Behavior*, 17, 323–336.
- Maio, G. R., Pakizeh, A., Cheung, W., & Rees, K. J. (2009). Changing, priming, and acting on values: Effects via motivational relations in a circular model. *Journal of Personality* and Social Psychology, 97, 699–715.
- McCabe, D. L., & Treviño, L. K. (1997). Individual and contextual influences on academic dishonesty: A multicampus investigation. *Research in Higher Education*, 38, 379–396.
- McCabe, D. L., Treviño, L. K., & Butterfield, K. D. (1999). Academic integrity in honor code and non-honor code environments: A qualitative investigation. *Journal of Higher Education*, 70, 211–234.
- McCabe, D. L., Treviño, L. K., & Butterfield, K. D. (2001). Cheating in academic institutions: A decade of research. *Ethics & Behavior*, 11, 219–232.
- McHoskey, J. W. (1999). Machiavellianism, intrinsic versus extrinsic goals, and social interest: A self-determination theory analysis. *Motivation and Emotion*, *23*, 267–283.
- Merton, R. (1938). Social structure and anomie. *American Sociological Review*, *3*, 672–682.
- Miller, A. G., Gordon, A. K., & Buddie, A. M. (1999). Accounting for evil and cruelty: Is to explain to condone? *Social Psychological Review*, *3*, 254–268.
- Moller, A. C., & Elliot, A. J. (2006). The 2 × 2 achievement goal framework: An overview of empirical research. In A. V. Mitel (Ed.), *Focus on educational psychology research* (pp. 307–326). New York, NY: Nova Science Publishers.
- Murdock, T. B., Miller, A. D., & Goetzinger, A. (2007). Effects of classroom context on university students' judgments about cheating: Mediating and moderating processes. *Social Psychology of Education*, *10*, 141–169.
- Nonis, S., & Swift, C. (2001). An examination of the relationship between academic dishonesty and workplace dishonesty: A multicampus investigation. *Journal of Education for Business*, 77, 69–77.
- Normille, D. (2012, July 2). A new record for retraction? Science Insider. Retrieved from http://news.sciencemag.org/ scienceinsider/2012/07/a-new-record-for-retractions-1.html
- Osgood, D. W. (2000). Poisson-based regression analysis of aggregate crime rates. *Journal of Quantitative Criminology*, 16, 21–43.
- Rettinger, D. A., Jordan, A. E., & Peschiera, F. (2004). Evaluating the motivation of other students to cheat: A vignette experiment. *Research in Higher Education*, *45*, 873–890.
- Rhee, R. J. (2009). The Madoff scandal, market regulatory failure, and the business education of lawyers (University of Maryland Legal Studies Research Paper No. 2009-30). *Journal of Corporation Law, 35.* Retrieved from http://ssrn.com/abstract=1407922
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57, 749–761.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theory and empirical tests in 20 countries. In M. Zanna (Ed.), Advances in experimental social psychology (Vol. 25, pp. 1–65). New York, NY: Academic Press.

- Schwartz, S. H. (1996). Value priorities and behavior: Applying a 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. (2006). Les valeurs de base de la personne: théorie, mesures et applications [Basic personal values: Theory, measures and applications]. Revue Française de Sociologie, 47, 129–168.
- Schwartz, S. H. (2007). Cultural and individual value correlates of capitalism: A comparative analysis. *Psychological Inquiry*, 18, 52–57.
- Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology*, 32, 519–542.
- Sims, R. (1993). The relationship between academic dishonesty and unethical business practices. *Journal of Education for Business*, 68, 207–211.

- Teixeira, A. C., & Rocha, M. F. (2010). Cheating by economics and business undergraduate students: An exploratory international assessment. *Higher Education*, *59*, 663–701.
- Trevino, L. K. (1986). Ethical decision making in organizations: A person-situation interactionist model. *Academy of Management Review*, 11, 601–617.
- Tumber, H. (2004). Scandal and media in the United Kingdom. *American Behavioral Scientist*, 47, 1122–1137.
- United Nations Conference on Trade and Development. (2012). *Trade and Development Report, 2012*. United Nations Publications. Retrieved from http://unctad.org/en/PublicationsLibrary/tdr2012_en.pdf
- Vogel, G. (2012, October 15). Leaked plagiarism report puts German science minister under pressure. *Science Insider*. Retrieved from http://news.sciencemag.org/scienceinsider/ 2012/10/leaked-plagiarism-report-puts-ge.html
- Whitley, B. E., Jr. (1998). Factors associated with cheating among college students: A review. *Research in Higher Education*, 39, 235–274.
- Wolf, N. (2012, July 14). This global financial fraud and its gatekeepers. *The Guardian*. Retrieved from http://www.guardian.co.uk/commentisfree/2012/jul/14/global-financial-fraud-gatekeepers