Value Stability and Change during Self-Chosen Life Transitions:

Self-Selection vs. Socialization Effects

Abstract

Three longitudinal studies examine a fundamental question regarding adjustment of personal values to self-chosen life transitions: Do values fit the new life setting already at its onset implying value-based self-selection? Or do values change to better fit the appropriate and desirable values in the setting, implying value socialization? As people are likely to choose a life transition partly based on their values, their values may fit the new life situation already at its onset, leaving little need for value socialization. However, we propose that this may vary as a function of the extent of change the life transition entails, with greater change requiring more value socialization. To enable generalization, we used three longitudinal studies spanning three different life transitions and different extents of life changes: Vocational training (of new police recruits), education (psychology vs. business students) and migration (from Poland to Britain). Although each life transition involved different key values and different populations, across all three studies we found value-fit to the life situation already early in the transition. Value socialization became more evident the more aspects of life changed as part of the transition, i.e., in the migration transition. The discussion focuses on the implications of these findings for research on values and personality change, as well as limitations and future directions for research.

Key Words: Values, value change, life transitions, personality change, value-fit.

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Socialization Effects

Recent findings suggest that although values are largely stable, when they do change, such change is theoretically meaningful (e.g., Goodwin, Polek, & Bardi, 2012; Lönnqvist, Jasinskaja-Lahti, & Verkasalo, 2011). Value scholars have suggested that as part of adjusting to a life transition people's values change in a way that better fits the new life situation (e.g., Bardi & Goodwin, 2011; Rokeach, 1973; Schwartz & Bardi, 1997). This includes socialization into a new setting or role. But what might we expect if the life transition was chosen by the person? When people choose to change their life in a particular way (e.g., embark on a particular career) their decision may be partly based on their values. Hence, it may be that they already possess the values that seem most appropriate in the new life-setting. If this is the case, would value socialization still occur in response to the new life setting? This paper is the first to test this question systematically using longitudinal designs. It examines evidence in line with value-based self-selection vs. value socialization into self-chosen life transitions across three different life contexts.

Values

Values convey important life goals (e.g., achievement, tradition). They are general beliefs about personally desirable end states or behaviors, ordered by their personal importance, and they guide evaluation and behavior (Schwartz, 1992). Indeed, values are empirically associated with perceptions, attitudes, goals, and behaviors (see reviews in, e.g., Bardi, Calogero, & Mullen, 2008; Boer & Fischer, in press; Maio, 2010; Roccas, & Sagiv, 2010). Hence, values are likely to also guide people's life choices, such as choosing a degree major, a career, or moving to another country.

Values are one aspect of a person's personality, if personality is broadly defined. They can be seen as characteristic adaptations in broad models of personality (McRae &

Costa, e.g., 1999). Consequently, they are related to other aspects of the personality

including traits (e.g., Roccas, Sagiv, Schwartz, & Knafo, 2002; Vecchione, Alessandri,

Barbaranelli, & Caprara, 2011), needs (e.g., Calogero, Bardi, & Sutton, 2009), and attitudes

(meta-analysis in Boer & Fischer, in press). Despite the meaningful correlations among these

variables, it is important to acknowledge that they do not overlap conceptually. Unlike

values, traits include descriptions of recurrent behavior and affect (e.g., Allport, 1961).

Unlike values, people do not choose their needs (see Carver & Scheier, 2012). Unlike

attitudes, values are ordered by importance, and they are more abstract than most attitudes

(Schwartz, 1992).

        The most prevalent theory of values to date is the Schwartz (1992) value theory,

which we employ here. This theory defines ten values according to the motivations that

underlie them, and their structure is portrayed in Figure 1. Specifically, the ten values are

structured in a circle, such that any two adjacent values are positively related and thought to

share an underlying motivation. Values that emanate from opposite sides of the circle are

based on conflicting motivations and are therefore negatively related. The structure of values

and their cross-cultural equivalence of meaning have been established using many samples

around the world (e.g., Fontaine, Poortinga, Delbeke, & Schwartz, 2008).

Value-Fit to Life Situations

        A good value-fit to a life situation refers to holding values that can be readily pursued

in that environment and avoiding values whose pursuit would be blocked. There is some

evidence for the existence such value-fit. Specifically, workers held values that fit their

occupations (Knafo & Sagiv, 2004); and citizens of former communist countries held values

that fit life conditions under communism (Schwartz & Bardi, 1997). Such value-fit is

adaptive as it leads to adaptive behaviors. For example, police officers must enforce the law.

If they value conformity and power, they are more likely to be motivated to enforce (through

power values) the law (through conformity values) even in difficult situations, and are thus

able to behave in line with their role expectations. Second, values serve as justifications for

behavior (Schwartz, 1992). If a certain behavior is seen as appropriate and desirable in a life

situation, holding the values that motivate this behavior can help justify it. For example, for a

police officer, valuing conformity (to the law) and power (to enforce it) can serve to justify

arresting a suspect who appeals to the police officer's guilt in detaching her from her young

children. A police officer who does not value conformity may feel more frustrated in such

situations. Hence, good value-fit is adaptive. Indeed, studies found positive correlations

between well-being and values that fit the life situation (Sagiv, Roccas, & Hazan, 2004).

How does such value-fit come about? In self-chosen life settings, such as the ones

studied in this paper, there can be three broad ways to value-fit: People may choose the life

setting based on their values (i.e., *self-selection*); people may gradually acquire the values

that are regarded as appropriate and desirable in the life setting (i.e., *socialization*[1], as

defined, e.g., by Schneider, 1987); or a combination of both – people may choose life settings

based on their values and that value-fit may become even stronger with time. But because

there are strong forces towards value stability (see Bardi & Goodwin, 2011), it is possible

that value socialization will occur only if many aspects of life change as part of the change in

life situation. Otherwise, as values are very broad, the values that do not fit the new

environment could still be pursued in other aspects of the person's life. For example, a police

officer who values self-direction (independence in thought and action), which may not fit

well with this role, can pursue these values in his or her spare time through hobbies. It may

also be possible to find a role within an occupation that enables fulfilling the values that

generally do not fit the occupation. For example, a police officer who values self-direction

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[1] Note that value socialization only refers to acquiring the values that are deemed appropriate and desirable in
the life situation, hence it does not cover every possible change in values. For example, an increase in security
values found in a longitudinal study of migrants (Lönnqvist et al., 2011) was not attributed to socialization
because security values are not highly important in the host country. Instead, it was attributed to a more general
process of adaptation to life conditions as a result of reduced sense of security as a migrant.

may try to find a role that enables the pursuit of self-direction, such as developing new

programs for police trainees. But if many aspects of life change as part of the life transition it

may be more difficult to continue to pursue values that do not fit anymore, leading to greater

pressure for value change. Indeed, a longitudinal study in which participants differed in the

life changes they experienced found greater overall value change (across all values) the

greater the extent of changes participants experienced (Bardi, Lee, Hofmann-Towfigh, &

Soutar, 2009, Study 4). Yet because in this study participants experienced a verity of life

changes it was not possible to draw hypotheses regarding specific contents of values that

might show socialization. This would require using longitudinal designs in which all the

participants experience the same life transition. In the current paper we examine the interplay

between possible self-selection and socialization of values within three major life transitions:

Vocational training, education, and migration. We next review the literature on self-selection

vs. socialization in each of these settings. In each section, we begin by reviewing research

that used personality variables other than values and continue with research that used values.

Self-Selection into a New Life Setting

In the organizational literature, Schneider (1987) suggested that the good fit observed

between employees and organizations may be a result of attraction, selection, and attrition.

That is, people are attracted to organizations that fit them; organizations select employees

who fit them; and those who do not fit the organization end up leaving it (evidence reviewed

in Schneider, Smith, & Goldstein, 2000). Similarly, individuals with a high score on the trait

openness to experience tended to be attracted to occupations in art and research (Gottfredson

Jones, & Holland, 1993). Furthermore, in a longitudinal study, traits at age 18 predicted

matching occupational characteristics at age 26 (Roberts, Caspi, & Moffitt, 2003). For

example, trait agency at age 18 predicted working in a job with high stimulation. Schneider's

(1987) suggestion can be extended to other life settings. For example, high sociability

predicted migration to urban areas (Jokela, Elovainio, Kivimäki, & Järvinen, 2008).

With regard to values, career counselees tended to have occupational interests that fit

their values (Sagiv, 2002). Furthermore, students majoring in economics valued self-

enhancement more than other students (Gandal, Roccas, Sagiv, & Wrzesniewski, 2005),

although as they were not necessarily in the beginning of their studies the effects could have

been due to socialization. This study was conducted in Israel, where men and women

typically start their university studies after compulsory military service of between 18 months

and three years. Hence they have had more life experiences than the typical student in most

countries, and it is possible that their choice of university major is based on greater

knowledge of themselves and the types of occupations that fit them. Indeed, values were not

directly linked with a university major in Australia (Feather, 1988). Thus, it remains to be

seen if values are meaningfully related to a university major in people who typically start

their university studies immediately after high-school. Hence, overall, there is some evidence

for value-based self-selection into some life transitions, but also some inconsistent findings.

Socialization into a New Life Setting

There is some evidence for the socialization of personal attributes as a result of a life

transition. For example, Cable and Parsons (2001) found that during the first two years of a

job, new employee's work-related attributes (e.g., attention to detail) became more similar

to the organizational culture the more they experienced support from other employees and

the clearer the requirements for career progression were to them. Regarding basic personality

traits, conscientiousness increased in young adults the more they were engaged in life

transitions that required this trait (Bleidorn, 2012). Similarly, working more at young

adulthood was found to predict greater trait agency in middle adulthood (e.g., Roberts, 1997).

Finally, in educational settings, attitudes became more in line with one's university major

(reviewed in Chatard & Selimbegovic, 2007). For example, unlike social science and art students, engineering students increased their endorsement of punitive attitudes towards criminals (e.g., an attitude in favor of the death penalty) throughout their studies (Guimond, 1999). Yet, at the beginning of their studies, there were no significant differences between the attitudes of students in these two different majors.

Values, however, may be less amenable to socialization compared to attitudes. Because values are more abstract than most attitudes (see Schwartz, 1992), they are likely to occupy more central positions in people's core schemas, rendering them more difficult to change (Bardi & Goodwin, 2011). Indeed, there is currently no research supporting value socialization in the migration context, even though the definition of acculturation includes value adoption of the host society's values (e.g., Masgoret & Ward, 2006). There is more research on value socialization in the vocational context, but even in this area there are no firm findings. The research of Kohn and Schooler (e.g., 1969; reviewed in Spenner, 1988) is often cited to show value socialization. This research found that people in jobs that enabled autonomy tended to value self-direction whereas people in jobs that did not enable autonomy tended to value conformity. However, these studies were not longitudinal, therefore it is impossible to know if their values changed towards better fit as a part of a process of socialization or if these people selected their occupations based on values.

In the educational domain, context-specific job values (e.g., independence in the job) tended to remain stable throughout the three years of university studies thereby showing no socialization effects (Dæhlen, 2005). Similarly, with regard to basic values, there were no differences in self-enhancement values between economics students at the beginning of their studies and those at the end of their first degree suggesting lack of value socialization (Gandal et al., 2005), but only a longitudinal design would enable concluding this with confidence. Currently, the only published longitudinal study examining potential

socialization effects in the educational domain tested value change during an MBA program

in India (Krishnan, 2008). However, the study used only single items of values using the

Rokeach (1973) list of values, which did not include power, a value central to business

studies (see Sagiv & Schwartz, 2000). Similarly, Feather (1975) examined value change in

students of various study programs throughout the duration of their studies. In this study, too,

only single items were assessed. Moreover, as the sample was comprised of students from all

subject areas, it was impossible to develop clear hypotheses regarding which values should

change beyond those pertinent to the general role of a student.

A study of immigration of Ingrian-Finns back to Finland (Lönnqvist et al., 2011) from

generations of residing in Russia could potentially test for socialization effects. However, it

is not clear how much of the original Finnish culture was maintained in the sample during

their life in Russia, and therefore it is not clear how much value socialization was needed

upon returning to Finland. Overall, there is currently no longitudinally-based evidence in the

literature for value socialization during adulthood, although this process seems plausible and

has been suggested previously (e.g., Chatard & Selimbegovic, 2007; Chatman, 1991).

Combined Effects of Self-Selection and Socialization

It is plausible that both self-selection and socialization occur during a life transition.

People may self-select into a life transition based on their personality but continue to increase

their fit to the new life situation as time goes by (see, e.g., Abele, 2003). There is some

evidence for such effects with regard to personality traits and attitudes. Specifically,

choosing to serve in the military was predicted (negatively) by trait agreeableness, and trait

agreeableness became even lower with time after joining the military (Jackson, Thoemmes,

Jonkmann, Lüdtke, & Trautwien, 2012). Similarly, compared to a control group of working

adults from the general population, new police recruits had higher levels of prejudice towards

prisoners, but these levels were still lower than those of police officers who have been trained

for one year (Gatto, Dambrun, Kerbrat, & De Oliveira, 2010). In the education context, a

study found that at the end of their first year, psychology students scored significantly lower

on Social Dominance Orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994) than

law students, but these differences were even stronger by their third and fourth year of

university (Guimond, Dambrun, Michinov, & Duarte, 2003). We note, however, that the

latter two studies were not longitudinal; hence caution should be exercised in drawing

conclusions with regard to socialization effects. No evidence for combined self-selection and

socialization is available with regard to values.

To summarize, the literature reviewed above provides imperfect evidence with regard

to value-based self-selection into educational and vocational life transitions, and there are

currently no studies that examined this question in the migration context. With regard to

value socialization into a life transition, there is currently no published evidence that could

support or refute this proposition. Moreover, there are currently no published studies that

provide evidence for the interplay between value-based self-selection vs. socialization into

life transitions. Hence, it is important to conduct longitudinal studies that will examine this

question systematically across different life transitions.

The Current Research and its Analytical Strategy

The current set of studies contrasted evidence in line with value-based self-selection

into a self-chosen life transition vs. value socialization to the new life setting. To enable

generalization, we examined this question across three different life transitions – vocational

training, education, and migration. These contexts differed in the key values that were

central to the new life setting. The studied contexts also differed in the number of aspects of

life (e.g., social environment, place of residence) that changed as part of the life transition

and the studies are ordered from the least to most aspects of life that were likely to change.

Study 1 tested this question in a vocational training setting, during a training course of new

police recruits, where the main life context that changed was working day activity. Study 2

tested the same question in an academic setting, where participants underwent changes in

both their working day and evening social activities, and often place of residence. Study 3

tested this question within an acculturation setting, in a longitudinal study of Polish migrants

to Britain, where many aspects of life changed (working day activity, social environment,

place of residence; but also culture, language, and public services, such as health services).

In each of the studies, our Time 1 assessment was shortly after the onset of the

transition, as long-term value changes are likely to take time (see Bardi & Goodwin, 2011).

Indeed, in longitudinal studies, meaningful value changes were found when the time gap was

at least nine months (Hofmann-Towfigh, 2007; Lönnqvist et al., 2011), and the structure of

intra-individual value change was less clear when studied over a period of three months

compared to periods of at least nine months (Bardi et. al, 2009).

Our analytical strategy for testing evidence in line with value-based self-selection was

to examine the values of the target sample at the beginning of the life transition and compare

them to a relevant sample. This approach has been effectively employed in previous research

on self-selection vs. socialization using personality traits and attitudes (e.g., Gatto et al.,

2010; Jackson et al., 2012). A comparison with a relevant sample is particularly important

for identifying value-based self-selection because there are strong commonalities in value

hierarchies (Schwartz & Bardi, 2001). For example, benevolence values are usually rated as

the most important values of all ten values. Hence, finding that a sample values benevolence

the most is not informative as this is the norm. Instead, we need to compare the value profile

of our studied sample to a relevant sample, and draw conclusions from this comparison.

To examine evidence in line with value socialization we used a longitudinal design

and examined mean-level changes in values using repeated measures multivariate analysis of

variance as is recommended for such longitudinal analyses (e.g., Mroczek, 2007). That is, we

examined whether the target sample changed in the same direction on average towards the

values that reflect socialization based on our theoretical predictions or comparisons with a

relevant sample. This operationalization has been used in most of the previous studies

reviewed above. This indicator of socialization can be referred to as an objective indicator of

socialization, as it compares the sample's means to an external standard. Alternatively, one

could examine which values the participants perceive as the socialized values in each context

and test progress towards these values. The latter could be referred to as a subjective

standard as it depends on participants' perceptions. This terminology of objective vs.

subjective fit is prevalent in the literature on person-environment fit and results in different

effects (reviewed in Kristof-Brown & Guay, 2011). We have chosen to examine objective

standards of socialization, as the question of interest was whether there is actual socialization

into the values expected to reflect socialization in the new life context, rather than to test

whether there is progress towards the values that participants think reflect socialization.

Study 1: A Vocational Life Transition

Embarking on a new career path is a major life transition that people are likely to

choose carefully, probably partly based on their values (see, e.g., Sagiv, 2002; Schneider,

1987). In this study, we examined evidence in line with value-based self-selection and value

socialization in new recruits training to be police officers. Holding the values that fit this

profession is highly important for functioning as a police officer and being happy in this

profession. Police officers who do not hold the values that fit the profession may find it hard

to perform their duty under difficult conditions, such as arresting people who try to resist.

Hence, although value-based self-selection may affect the choice to become a police officer,

there is also high potential for value socialization. Moreover, police trainees receive formal

training and close mentoring by experienced police officers, both of which are likely to

increase socialization effects (Cable & Parsons 2001; Chatman, 1991).

Evidence in line with value-based self-selection. Three values seem to be key

motivators in this profession in a clear direction: Conformity, self-direction, and power. In

addition, security values also seem highly relevant, but in two opposite directions.

Conformity vs. self-direction. Police officers have to abide by, protect, and enforce

laws that they did not create. They may not even agree with some of the laws that they must

enforce. This is likely to be very difficult for people who value self-direction, as self-

direction values express the motivation for independent thought and action. However, people

who value conformity are likely to feel that although they may disagree with a specific law, it

is important to enforce all laws. This is likely to make it easier for them to do their job well.

Hence, this profession is suitable for those who value conformity more and self-direction less

than the general population.

Power. Police officers enforce their authority as part of their job. Hence, this job

enables them to fulfill values of authority, power, and dominance over others. It is also likely

to be easier for people who value power to face verbal and physical objections during conflict

or when they are or are trying to make arrests.

Security. These values are highly relevant to the profession of a police officer.

However, different aspects of security are relevant in opposite directions with regard to this

profession. On the one hand, police officers maintain the social order and safety of the

community, enabling the fulfillment of security values by performing this job. On the other

hand, police officers endanger their own personal safety as part of the job, thereby violating

security values. Indeed, in a previous study police officers reported high levels of fear of

death (Gatto et al., 2010). Hence, it is impossible to form clear expectations regarding

security values in this context.

Evidence in line with value socialization. If value socialization occurs we would expect to find an increase in the importance of conformity and power values and a decrease in the importance of self-direction values during the police training course.

Method

Participants. A total of 81 police trainees from a police force in England participated in this study at the beginning of their training; 63 participated nine months later. We analyzed data from the 39 police trainees (17 females) who participated in both times[2]. Police trainees have to complete a two year training program. At the start of their training, their age range was 19-44 (*M*=27, *SD*=6.64). Participants were mainly single (53%) or married/cohabiting (45%), and most of them (75%) did not have children. Typically, their highest level of education was a first degree at university (45%) or high school with national graduating exams (35%). They came from a variety of jobs including professional jobs (26%), sales and customer service jobs (26%), administrative and secretarial jobs (13%) as well as others. None reported being unemployed before joining the police.

Attrition analysis. To examine potential bias due to attrition, we compared participants who took part in both waves of data collection with those who did not on all demographics and values in Time 1. There were no significant differences in any of the demographic measures between these groups. A MANOVA on the ten values revealed that the overall pattern of value importance across the ten values did not differ significantly between the groups (*F*(10, 69)=.90, *p*=.54). None of the ten values differed significantly between the groups, suggesting that our findings are free of bias due to attrition.

Procedure. Participants completed the first wave of assessment in the second week of their training, while in class. By the second week of their training they had only been

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[2] Although a small sample size, Power Analysis indicated sufficient statistical power. Specifically, for a Cohen's (1992) medium effect size (.50) of a repeated measures t-test with the standard statistical power of .80, and using a two-tail test at a significance level of .05, the minimum sample size is 34, but we used MANOVA which is statistically more powerful for use on moderately correlated variables (Field, 2011).

inducted into the police, had taken an oath at court to serve well as police officers and had

been fitted with uniforms. Their training had only been classroom based and they had not

been exposed to the wider police culture found on operational police stations or divisions.

This is also before they had been tutored by more experienced officers on the streets or had

worked alongside operational officers. Hence, at this point they were not likely to realize the

drawbacks of holding values that did not fit the profession. We compared their values at this

initial stage to their values measured, while in class, nine months after the beginning of their

training. By this stage, they had direct experience with the difficult aspects of being a police

officer as they have spent time on community placements such as prison and other

challenging environments. Also, by this time they have been tutored by more experienced

police officers and undertaken some police duties in an operational setting. This includes

having to make arrests, and they may have experienced some confrontational situations.

Measures. Participants completed the most recent version of the Schwartz (1992)

Value Survey (Schwartz, Sagiv & Boehnke, 2000). The questionnaire includes a list of value

items followed by a definition, e.g., "AUTHORITY (the right to lead or command)"

measuring power values. Three to eight items measure each of the ten values. Participants rate

how important each of the value items is to them as a guiding principle in their lives on a 9-

point scale ranging from -1 (opposed to my values) through 0 (not important) to 7 (of supreme

importance). The asymmetry of the scale reflects the distinctions among values that people

naturally make (Schwartz & Bardi, 2001) and use of negative values is quite rare (see more

detail in Bardi et al., 2009) thereby minimizing problems with scale asymmetry. Most of the

Cronbach alpha reliability coefficients were comparable to those found in previous research

(Schwartz, 2005) and ranged from .49 to .77. At the beginning of training, power values had

a particularly low Cronbach alpha coefficient (α=.31). A closer inspection of the inter-item

correlations for this value revealed a negative correlation between the value items 'wealth'

and 'social power' (r=-.12). We therefore removed the item 'wealth', and the Cronbach

alpha coefficient increased to .47 based on two items – 'social power' and 'authority'. This

also made the power value index more relevant to the police officer role, as police officers

can gain authority and social power from their role, but not wealth. We made the same

change to the index of power values of the later time of nine months into the training.

As people vary in scale use on this questionnaire and as there are no reversed items,

Schwartz (1992, 2005) recommends controlling for the personal mean of value rating, and

this method of control is now widely used (e.g., Sverdlik, 2012). Hence, for each of the

participants, we first computed their average rating across all the value items (i.e., their grand

mean). We then subtracted this grand mean from each value item, thereby controlling for

one's personal average rating while maintaining individual differences in variance. Hence

values with a positive sign reflect prioritizing the value more than the average value

importance to the person, and values with a negative sign reflect prioritizing the value less

than the average value importance to the person. This data transformation is compatible with

the understanding of values as part of a personal value system, in which the crucial aspect is

how much a value is prioritized over other values. As is common procedure with analyzing

values, all of the inferential statistical analyses were conducted on these adjusted scores.

Accordingly, the means presented in the tables are also based on the adjusted scores.

Results and Discussion

Evidence in line with self-selection. To examine value differences between police

trainees at the beginning of their training and the general population in Britain we used data

from the European Social Survey (ESS). The ESS is a large scale survey, conducted every

few years using representative samples in each European Union country. It includes a value

questionnaire based on the Schwartz (1992) value theory. We compared the values of our

participants at Time 1 to the values of the representative sample from Britain in the ESS wave

3 (2006-7), which was similar to the time our data were collected (2007-2008). As values

vary by age (Schwartz, 2005), we included only participants of the same age range as our

participants (19-44). This sub-sample had 912 participants (55% females). The ESS used a

different value measure based on the same theory and measuring the same ten values (PVQ

with 21 items, see detailed description in Study 3). This measure has a different response

scale (6 points instead of the 9 points of the SVS). Hence to enable comparison of the two

samples on value means we ipsatized all the value ratings by transforming them to z-scores

around the personal mean and personal standard deviation across values. Because we

removed the item pertaining to wealth from the index of power values in our sample, we also

removed this item in the ESS sample. We compared the ESS value means to the means of

value importance at the beginning of the police training.

MANOVA indicated that the value profile of police trainees at Time 1 differed from

that of the general population in Britain ($F(10, 939)=16.80$, $p=3.13E-28$, $d=.15$). More

importantly, this was also the case when only the values central to this life transition

(conformity, self-direction, and power) were included ($F(3, 947)=22.82$, $p=2.88E-14$, $d=.07$).

The mean differences between these two samples are presented in the first column of

Table 1, such that a positive sign indicates a value that is more important to our sample of

police trainees than to the general population. Univariate analyses conducted as part of the

MANOVA indicated that all three key value differences are significant and in line with

value-based self-selection. Specifically, police trainees valued conformity and power more

than the general population, and they valued self-direction less than the general population.

Hence all value differences are in line with value-based self-selection.

Although security values are relevant to this profession, we argued that we cannot

draw a clear hypothesis in their regard. And indeed, there were no significant differences in

the importance of security values between police trainees and the general population.

Three additional significant differences were found. First, universalism values were less important to police trainees than to the general population. Hence, people who choose to be police officer are probably less motivated to benefit others outside their group. It may even be harder to do one's job well (e.g., arrest people) if one is motivated by a wish to be tolerant and understanding of people outside one's group, as criminals are probably viewed as outgroup members. Indeed, police recruits were found to be more prejudiced against prisoners than other people (Gatto et al., 2010). Second, achievement was more important to police trainees than to the general population, and ambition may be a feature of any group of people about to embark on a new career. Third, tradition values were less important to police trainees than to the general population. This may be another general feature of people about to change their life, as for many of the police trainees this would have been a second career.

Together, these findings suggest that the values of police trainees fit their profession already at the onset of training. Yet although the differences were significant and consistent, the effect size was small, leaving scope for socialization in addition to self-selection. Would their values become even more in line with their new career as they progress in training?

Evidence in line with socialization. We compared the values of the police trainees at the onset of training to their values nine months into the training. A repeated-measures MANOVA on the ten values and two times of assessment revealed a marginally significant overall effect of time on the profiles of the values ($F(10, 28)=1.92$, $p=.08$, $d=.41$). However, this effect was not significant when including only the hypothesized values ($F(3, 36)=1.78$, $p=.17$). This suggests that although there was some change in values with time, it was not in the values expected to change as a result of socialization into the police profession. The means and standard deviations of participants' values are presented in Table 1, as well as the difference in values between the times. Univariate analyses within the MANOVA resulted with no significant differences between times.

We also tested if the overall changes in values were in line with a socialization process by comparing the overall value profile of respondents to the ESS in Britain to our police trainees at each time. This allowed us to see if there is a general trend to become less similar to people in Britain in value profiles across the three key values. We ran two MANOVAs, one for each time of assessment, each comparing the sample of police trainees to responses to the ESS from Britain, to see if the effect size of the overall differences between these groups across values becomes larger with time. The overall difference across the three key values was slightly larger in Time 1 (F(3, 947)=22.82, p=2.88E-14, d=.07) than nine months into the training (F(3, 946)=15.98, p=3.88E-10, d=.05), suggesting that the values of police trainees did not become more different from the general population in the direction of socialization into the police officer job.

The final column in Table 1 shows the longitudinal correlations, which are generally comparable to those obtained in previous research (Bardi et al., 2009). This suggests that there were some changes in values in this sample, but as a group, the group did not change in values in the direction of socialization. The longitudinal correlation for security values was unusually low (r=.12). This finding further supports the idea that while security values are highly relevant to the police-officer profession, they are relevant to this profession in opposite ways. Hence, it is plausible that they change in opposite directions for different people: for some they become more important while for others they become less important, resulting in high rank-order change.

Study 1 found evidence in line with value-based self-selection but not in line with value socialization. Our data show that police trainees already hold the values that fit their occupation when they start training. During their training, police officers' values remained largely stable; hence, there is no evidence of value socialization.

Perhaps a greater potential for value socialization is likely in an educational life transition, while studying for a university degree, as young people may not know themselves well enough to choose a specific university degree that fits them thus leaving more potential for value socialization throughout the degree. It is also possible that more time is needed to track value socialization than the nine months studied in Study 1. Finally, and perhaps most importantly, it is possible that more aspects of life should change for value change to occur. Specifically, the onset of police training probably did not lead to substantial changes in aspects of life outside the new occupation. Police trainees typically continued to live in the same place of residence as before, and they probably continued to interact with the same set of acquaintances outside work. In contrast, the start of a university degree typically entails moving residence (most students live in university accommodation in their first year and most have not lived in the same city before their studies), as well as changing the social environment of acquaintances they interact with on a daily basis in the evenings. Therefore, there may be greater potential for socialization effects. Hence, Study 2 examined evidence in line with value-based self-selection vs. value socialization while studying at university.

Study 2: An Educational Life Transition

Studying at university is an important and prevalent life transition. Indeed, the university studies period was proposed to be the main reason that most personality changes occur during young adulthood (Krosnick & Alwin, 1989). Young people may also choose their degree program partly based on their values (Sagiv, 2002; Gandal et al., 2005).

We compared psychology and business students because these professions emphasize opposite values, and there is already some empirical evidence for this (Knafo & Sagiv, 2004; Sagiv & Schwartz, 2000). Hence, if people's choice of a university major is in line with their values, we should find that psychology and business students clearly differ in their value

priorities already at the start of their studies. If value socialization occurs we would expect an increased importance, with time, of the key values in these professions.

Students in Britain major from the start of their degree, and most students register to a single-major. Hence, they make their choice of a university major before having any experiences at university. However, unlike Israel where the previous relevant studies were done (Gandal et al., 2005; Sagiv & Schwartz, 2000), people in Britain make their choice typically at a younger age, during their last year of high school, before they have had important life experiences. This reduces the chance that they know themselves well enough to choose a major which will fit their personal values.

Evidence in line with value-based self-selection. Four values seem to be relevant for the pursuit of the psychology and business university degrees.

Benevolence and universalism. Benevolence and universalism values express the motivation to enhance the well-being of others and are therefore pivotal to the profession of a psychologist. In contrast, prioritizing these values can be detrimental to the work of business managers as it can stand in their way of maximizing the company's financial success. Hence, if people choose to study business at university in line with their values, they are likely to attribute relatively low importance to benevolence and universalism values. Therefore, if value based self-selection occurs we would expect psychology students to attribute greater importance to benevolence and universalism values than business students.

Power and achievement. Power values express the motivation for dominance and status. These values are at the heart of business management, in which the main goal is to make money and acquire prestige, as well as to make decisions for others and hence to exert dominance over them. These values are in conflict with the main aim of the psychology profession which is to help others rather than dominate them and pursue prestige. As a result, if there is value-based self-selection in choosing a university program, we should find that

already at the beginning of their degree business students value power more than psychology students. Such patterns of value differences were indeed found in past research in Israel with psychology and business students who were not necessarily at the beginning of their studies (Sagiv & Schwartz, 2000) and with psychologists and managers (Knafo & Sagiv, 2004).

Theoretically, achievement values that express the motivation for success according to social standards, should also serve to differentiate between the psychology and business environments. And indeed, people who work in the financial and business industry value achievement more than psychologists (see Knafo & Sagiv, 2004). Yet in order to be accepted to a clinical psychology program (the main goal of most psychology students in Britain) one has to graduate with top grades. Therefore, during the university studies achievement values serve to motivate the high grades needed for a future career as a psychologist, and as a result they are not likely to differentiate between psychology and business students.

Evidence in line with value socialization. If value socialization occurs psychology students should experience an increase in benevolence and universalism values and a decrease in power values during their studies. We would expect business students to show the opposite trajectory of value change: their power values should become more important with time and their benevolence and universalism values should become less important.

Method

Participants and procedure. We distributed questionnaires to psychology and business students at the end of lectures at the beginning of Year 1, 2, and 3 (the final year) at a university in England. Hence, some attrition would have been due to absence from the lecture. We recruited 308 psychology students at Time 1, 276 at Time 2, and 212 at Time 3. A total of 131 psychology students (110 females) participated in all three waves of assessment and were therefore included in the statistical analyses. Their average age at Time 1 was 18 (*SD*=2.68, range 18-43). We also recruited 319 business students at Time 1, 273 at

Time 2, and 288 at Time 3. Yet due to the format of lectures in business studies with many

more optional courses, of these, only 65 business students (28 females) took part at all three

times. Their average age at Time 1 was 19 (SD=.87, range 18-22). Participants received

either extra course credit or the equivalent of $7 for each completed survey.

   Attrition analysis. We compared participants who took part in all three waves of data

collection to those who only took part at Time 1. There were no significant differences in

age, sex, or ethnicity between the groups of psychology students. MANOVA on the ten

values in psychology students revealed that the overall pattern of value importance across the

ten values did not differ significantly between psychology students who participated in all

waves of data collection and those who did not (F(10, 295)=1.52, p=.13). Only one of the

ten values significantly differed in importance between the groups. Specifically, participants

who took part in all of the times of assessment attributed a higher importance to tradition

values compared with those who did not take part in all waves (M=-1.16 vs. -1.46,

respectively, p=.01). However, as tradition values were not part of the hypotheses, there

should be minimal effect on our conclusions regarding self-selection or socialization.

   There were no significant differences in age, sex, or ethnicity between the groups of

business students. MANOVA on the ten values in business students revealed that the overall

pattern of value importance across the ten values did not differ significantly between the

groups of business students (F(10, 307)=.70, p=.72). None of the ten values differed

significantly between business students for whom we had complete data and those who

dropped out, suggesting that our findings are free of bias due to attrition.

   Measures. As in Study 1, participants completed the most recent version of the

Schwartz (1992) Value Survey (Schwartz, Sagiv & Boehnke, 2000). As found previously

(Schwartz, 2005), internal reliabilities ranged from .44 to .78, except for the reliability of

self-direction values in the business sample at Year 1 (Cronbach alpha=.36), and that of

stimulation values in the business sample at Year 2 (Cronbach alpha=.37). A closer

examination of inter-correlations among the items comprising these values did not reveal any

particular value item that might have been misunderstood. As these are standard indexes that

have been frequently used in previous publications, we decided to use this index. These

values were not part of the hypotheses, thereby reducing the effect on conclusions regarding

self-selection or socialization. As in Study 1, we centered all items around participants'

personal mean value across the entire questionnaire.

Results and Discussion

As is typical in psychology degrees, most of the students were female. In contrast,

business studies tend to have a more even distribution of sex. Moreover, the key values in

this study are those that have the strongest sex differences. Specifically, men tend to value

power more than women and they tend to value benevolence less than women (Schwartz &

Rubel, 2005). Hence, confirming an expectation based on self-selection that psychology

students value benevolence more, and power less, compared to business students, could

simply stem from the known differences between the sexes, and could therefore contaminate

the results. Thus, we initially controlled for sex in our analyses. However, sex was not a

significant factor in any of the comparisons, and it did not interact with any of the other

effects (values and time). We therefore report findings without controlling for sex.

Evidence in line with self-selection. To test for evidence in line with value-based

self-selection into psychology or business degrees, we compared the value priorities of

psychology and business students at the beginning of Year 1 of their studies.

MANOVA indicated that the value profile of psychology students at the beginning of

their studies differed from the value profile of business students at that time ($F(10$,

$184)=5.93$, $p=9.14E-8$, $d=.24$). More importantly, this was also the case when only the

hypothesized values were included in the analysis ($F(3, 191)=15.64$, $p=9.14E-8$, $d=.20$). The

first column in Table 2 presents the mean differences between psychology and business students at the beginning of their studies, such that a positive sign indicates that the value is prioritized more by psychology students than by business students. Expected differences based on self-selection are in bold. Univariate analyses, conducted as part of the MANOVA that included all ten values, indicated that as expected based on a self-selection process, psychology students attributed higher importance to benevolence and universalism values and lower importance to power values compared to business students. Hence, there is evidence in line with value-based self-selection into the psychology vs. business degrees.

There were, however, other value differences between psychology and business students. Specifically, hedonism values were less important to psychology than to business students. This makes sense as, like power and achievement, hedonism values express self-enhancement, and the business profession entails hedonistic rewards, unlike the psychology profession. Indeed, this pattern was also found in differences between psychologists and people working in the business environment (Knafo & Sagiv, 2004). Similarly, stimulation values, which share the motivation for "affectively pleasant arousal" with hedonism values (Schwartz, 1992, p.14), were also less important to psychology students than they were to business students. Finally, self-direction values were more important to psychology students at the onset of their university studies than to business students at the same point in time.

Evidence in line with socialization. Because in this study evidence in line with self-selection and socialization could be tested using the same sample, it was possible to conduct a MANOVA that includes the effect of time (3 times) and between-groups difference (psychology vs. business), enabling the test of an interaction between the two effects. A MANOVA that included all ten values resulted with an overall difference between psychology and business students in value profiles across the three times ($F(10, 182)=7.22$, $p =1.45E-9$, $d=.28$), an overall change across time ($F(20, 172)=1.90$, $p=.02$, $d=.18$) and a

marginal effect of interaction between degree program (psychology or business) and time ($F(20, 172)=1.61$, $p=.06$, $d=.16$). This suggests that psychology and business students differ in value profiles, and that there was a mean-level change in values across time, as well as differences between the groups in these changes. However, this does not mean that the changes were in the direction of socialization towards the future professions of psychologists and business managers. To test for these specific effects, we conducted the same MANOVA but included only the three key values (i.e., benevolence, universalism, and power). This resulted in an overall difference in value profiles across the three times ($F(3, 190)=18.79$, $p=$ 1.03E-10, $d=.23$), but no overall change across time ($F(6, 187)=1.16$, $p=.33$) and no interaction between degree program and time ($F(6, 187)=1.43$, $p=.20$). Hence, the overall change in values was not in the values that are relevant to a socialization process.

Table 2 presents the means of values of psychology students in each time. Univariate tests across the three times, included in a MANOVA that ran on the full set of ten values in psychology students, revealed a significant change across time in four values: Stimulation ($F(2,256)=4.81$, $p=.009$, $d=.04$), hedonism ($F(1.86,237.69)^3=3.42$, $p=.04$, $d=.03$), security ($F(1.89,242.20)=4.27$, $p=.02$, $d=.03$), and conformity ($F(1.91,243.86)=4.27$, $p=.01$, $d=.04$). We complemented these analyses with pairwise comparisons between each pair of times with Bonferroni corrections, and significant changes are noted on Table 2. Yet most importantly, there were no significant changes in the importance of the key values to psychology, that is, in benevolence, universalism and power values. Hence, although there was value change, there was no evidence for value socialization in psychology students overall.

The means of values of business students in each time of assessment are presented in Table 3. Univariate tests across the three times, included in a MANOVA that ran on the full set of ten values in business students, resulted with no significant changes across time in any

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[3] The sphericity assumption was violated for hedonism, security, and conformity. We therefore used Greenhouse-Geisser correction for degrees of freedom (see recommendation in Myers & Well, 2002).

of the ten values, and none of the pairwise comparisons between each pair of times was significant. Hence, there is no evidence for value socialization in business students overall.

Career considerations and value change. In the Year 3 assessment, we also asked participants about their career plans for the future. This is important as it is possible that socialization effects will only occur for those planning to pursue a profession related to their studies, or that de-socialization will occur as a result of considering an alternative career. Hence, participants indicated whether they were considering a career that involves: (1) helping others, (2) management, and (3) a career that aims to make lots of money; and how confident they were with any of these career choices. We conducted regression analyses for each career choice and each value of interest separately. To examine predictors of change, we predicted value importance in the later time (Time 3). At Step 1 of the regression we entered value importance in the earlier time (Time 1 or Time 2), thereby controlling for stability in values. At Step 2 of the regression we entered the variable of considering the particular career. As the value in an earlier time was controlled for, the regression coefficient of the career choice indicated prediction of value change (see also Bardi & Ryff, 2007). These analyses resulted in some significant predictions, all in line with socialization or de-socialization. For example, in psychology students, considering a money-making career in Year 3 predicted a decrease in the importance of benevolence values from Year 1 to Year 3 (β=-.19, t=-2.37, p=.02); and considering a career in management predicted an increase in the importance of power values from Year 1 to Year 3 (β=.32, t=4.63, p=.000009). In business students, level of confidence in considering a money-making career predicted an increase in power values from Year 2 to Year 3 (β=.21, t=2.03, p=.047).[4]

These findings are in line with value socialization and de-socialization as a function of future career choice, but it is impossible to ascertain whether a career choice or change in

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[4] A full report of analyses and additional findings regarding career choice is available from the first author.

career choice preceded value change (indicating socialization) or vice versa – a change in

values has led to strengthening or changing career choice (indicating self-selection).

Pre-transition data. Is it possible that our Time 1 measurement, occurring in the

first month of the university studies, was too late? Could socialization processes occur

already in the first month of studies? If so, our findings, which we attributed to value-based

self-selection, were actually a result of rapid socialization. To address this possibility, we

distributed the same value questionnaires to prospective students of psychology and business

and compared their value patterns to one another and to our Time 1 participants. We

examined differences in the key values between prospective students of psychology and

business to see if they were already in line with self-selection. Moreover, should there be no

differences between prospective students and our Time 1 participants of the same major it

would support the view that there was no value socialization by our Time 1 data collection.

We approached prospective psychology and business students during visiting days to

a university in England and using an online link to prospective students, and we offered a

$150 prize draw. Some participants visited the university in order to decide whether to apply

to it; others visited after receiving an offer of a place at the university. This was 8-11 months

before they were due to start their studies. We also asked participants how sure they were

about choosing this major. They answered on a scale from 1 (not sure at all) to 2 (a bit sure)

to 3 (quite sure) to 4 (completely sure). We report analyses based on the 107 participants who

were either quite sure or completely sure of their choice (67 for a psychology major,

M_{age}=17.72, SD=2.56, 62 females; 40 for a business major, M_{age}=17.53, SD=.68, 26 females).

Analyses on all of the participants produced the same pattern of results.

Comparing prospective students of psychology and business. A MANOVA that

included the values that should distinguish between psychology and business (benevolence,

universalism, and power) resulted in an overall significant difference between the two sub-

samples ($F(3, 103)=8.75$, $p=3.18E-5$, $d=.20$) of the same effect size as in the parallel

comparison of our Time 1 participants. Univariate analyses within this MANOVA showed

that all values differed significantly between the sub-samples in line with self-selection. That

is, benevolence and universalism values were significantly more important to prospective

students of psychology compared with business (mean difference=.35, $F(1,105)=5.89$, $p=.02$;

mean difference=.52, $F(1,105)=11.29$, $p=.001$, respectively), and power values were

significantly less important to prospective students of psychology than business (mean

difference=-1.29, $F(1,105)=24.80$, $p=2.50E-6$). This provides evidence in line with value-

based self-selection already 8-11 months prior to the beginning of the life transition.

   Comparing prospective students to our Time 1 students. Some value socialization

could have occurred during the 8-11 months prior to the onset of the life transition, as a result

of post-decision dissonance processes (see, e.g., Festinger, 1957). That is, after they had

decided to study the particular major, the values that fit this major may have been further

strengthened. To provide some insight into this possibility, within each major, we used a

MANOVA to compare the value profiles (across the three relevant values, i.e., benevolence,

universalism, and power) of prospective students to those of our Time 1 participants. For

each of the degree majors, the overall difference between prospective students and our Time

1 participants was not significant ($F(3, 196)=1.35$, $p=.26$; $F(3, 101)=.25$, $p=.86$; for

psychology and business respectively), nor were any of the univariate analyses for each value

separately. There was therefore no significant difference in the relevant values for the two

majors 8-11 months prior to the onset of the life transition and the beginning of the life

transition, suggesting pre-transition value-socialization was unlikely.

   Study 2 provided evidence in line with value-based self-selection. Perhaps because

this study was conducted within a life transition that affects change in more than one life

aspect, there was also some support for value socialization. Yet this support was not obtained

consistently across all the relevant variables, and it was impossible to ascertain if career

choice preceded value change (indicating socialization) or value change preceded career

choice (indicating self-selection). As in Study 1, self-selection may have lowered the

potential for value socialization, as our participants already had the required values at the

beginning of the life transition, although this effect was small. Still, it is also possible that we

did not observe more value socialization in students because not enough aspects of life have

changed during this life transition. Perhaps in order to find evidence in line with value-

socialization the life transition has to be more all-encompassing. A migration life transition

may fit this condition. Migration entails substantial changes in almost all aspects of life:

Place of residence, activities during the day such as job, and the people one interacts with

outside work as in Study 2; but also change in country, culture, language, media exposure,

and use of services (different health-care system, different banks, etc.). Thus there may be a

greater chance for value-socialization effects during migration than during an occupational or

an educational life transition. Hence, in Study 3 we examined a migration life transition.

Study 3: A Migration Life Transition

Migration is a major life transition that requires adaptation (e.g., Furnham & Bochner,

1989). Hence, it has great potential for value change, particularly as people go through

socialization processes into the new country and its culture. People are also likely to consider

carefully the decision to move country and which country to move to. As people tend to

make decisions that are in line with their values (reviewed in Bardi & Schwartz, 2003),

values may also be related to the decision to migrate and the choice of country. Of course,

there are likely to be other reasons to immigrate to a particular country, such as joining other

family members and local unemployment rate. Still, it is possible that many people choose a

country to immigrate to partly based on a general impression that the new country would fit

their values better, hence they would be able to fulfill their values better in the new country

compared to their original country.   Therefore, immigrants' values may be in line with the

values common in the host country already at the beginning of their stay in this country.

We examined this question in the context of Polish migration to Britain. In the years

the study took place (2007-2009), there had been mass migration from Poland to Britain (see

details in Equality and Human Rights Commission, 2010). Therefore, we were able to recruit

a sufficient number of participants who had just arrived in Britain within the same short

period of time, and collect longitudinal data from them throughout the next year and a half.

Evidence in line with value-based self-selection. If migrants choose to move to a

country that fits their values then the value profile of Polish migrants to Britain should differ

from that of people in Poland in a direction that makes it more similar to the value profile of

people in Britain. Therefore, in order to know which values would be in line with value-

based self-selection in Polish migrants to Britain we first need to know how Britain and

Poland differ in values. Such knowledge can then be used to establish expectations for value

differences between Polish migrants to Britain and people in Poland, which would then

provide evidence in line with value-based self-selection in migrants.

Preliminary statistical analyses on ESS data to establish hypotheses. To examine

value differences between people in Britain and Poland, and between them and the Polish

migrants we used data from the ESS Wave 3 (2006-7), the wave closest in time to the data

collection of our Time 1. As values vary by age (Schwartz, 2005), we limited the samples

from the ESS to the age range of most of our study's participants, i.e., those between ages 20

to 40. Using MANOVA we found that the value profile across the ten values of respondents

in Poland (n=471, 243 females) and respondents in Britain (n=576, 322 females) differed

significantly ($F(9, 1036)=31.26$, $p=1.13E-48$, $d=.21$). Compared to the ESS respondents

from Poland, respondents from Britain attributed significantly more importance to self-

direction ($M=.24$ vs. .48, $SD=.74$ and .75, respectively, $F(1, 1044)=27.31$, $p=2.09E-7$),

stimulation (*M*=-.43 vs. -.22, *SD*=.78 and .90, respectively, *F*(1, 1044)=16.25, *p*=5.95E-5*)*,

hedonism (*M*=-.66 vs. -.04, *SD*=.96 and .92, respectively, *F*(1, 1044)=113.27, *p*=3.49E-25*)*,

and benevolence values (*M*=.51 vs. .79, *SD*=.58 and .59, respectively, *F*(1, 1044)=61.19, *p*=

1.26E-14*)*; and less importance to tradition (*M*=-.01 vs. -.28, *SD*=.80 and .91, respectively,

F(1, 1044)=25.11, *p*=6.36E-7*)*, conformity (*M*=.18 vs. -.50, *SD*=.68 and 1.02, respectively,

F(1, 1044)=153.23, *p*=6.15E-33*)*, security (*M*=.44 vs. .31, *SD*=.71 and .81, respectively, *F*(1,

1044)=8.24, *p*=.004*)*, and power values (*M*=-.67 vs. -.93, *SD*=.83 and .83, respectively, *F*(1,

1044)=24.82, *p*=7.35E-7*)*. Thus, evidence in line with value-based self-selection in Polish

migrants would be obtained if compared to people of the same age range in Poland, migrants

attribute higher importance to self-direction, stimulation, hedonism, and benevolence values;

and lower importance to tradition, conformity, security, and power values.

Evidence in line with value socialization. If migrants experience value socialization

into the new country, then we would expect their value priorities to change towards the value

priorities of people in the host country. Specifically, we would expect to find an increase

with time in the importance of self-direction, stimulation, hedonism, and benevolence values;

and decrease in the importance of tradition, conformity, security, and power values.

Method

Participants and procedure. We used the sample of the Longitudinal Study of

Polish Migrants (LSPM; Goodwin et al., 2012). Participants were Polish newcomers to

Britain who planned to stay for at least two years. They completed an online survey three

times: Time 1 was 0-3 months after arrival to Britain, and the next two times of assessment

were in 9 months intervals. They received incremental payment in online vouchers of the

equivalent of $9 for participation in Time 1, $12 in Time 2 and $15 in Time 3.

Participants were recruited through advertisements on websites for Polish migrants in

Britain, leaflets in Polish shops and newsagents, internet cafes in Polish neighborhoods,

Polish churches, airports, coach stations, employment agencies and Polish community

groups. In addition, articles advertising the project were published in Polish-language

magazines in Britain. This ensured a diverse sample widely spread throughout Britain (for

more details, see Goodwin et al., 2012). The survey was written in Polish.

We recruited 418 participants at Time 1, 228 at Time 2 and 214 at Time 3. Of our

Time 3 respondents, 40 respondents had returned to Poland. We analyzed the data from 151

participants (55% females) who stayed in Britain for the duration of the survey and

completed the three waves of assessments (M_{age}=27, SD=7.15, ranging 18-59, with 91%

between the ages 20-40). Most of the participants were unmarried (68%), enabling them to

move country more easily. Their highest level of education was typically a high school with

national graduating exams (39%) or higher education, such as university or polytechnic

(33%). 19% were unemployed in Poland, suggesting unemployment may be one reason for

migration, probably interacting with other psychological and non-economic reasons (Polek,

van Oudenhoven, & Ten Berge 2011; Tabor & Milfont 2011).

Attrition analysis. We compared the participants included in our analyses with the

participants who took part in Time 1 but not in Time 2 and/or Time 3. There were no

differences in age, sex, or marital status, but participants who remained in the study had

higher levels of education compared to those who dropped out[5]. We therefore tested whether

this might have biased some of the results, and these analyses are reported below as part of

testing for self-selection and socialization evidence. MANOVA on the ten values at Time 1

revealed that the overall pattern of value importance across the ten values did not differ

significantly between migrants who participated in all waves of data collection and those who

did not (F(9, 407)=1.18, p=.31). There was, however, one difference in values. Compared to

participants who did not take part in all waves of assessment, those who took part in all

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[5] The mean difference of level of education (on a scale of 1-7) between those who remained in the study and
those who did not was M = .35 (t(416) = 2.67, p = .008).

waves valued hedonism less (M=-.36 vs. -.61, respectively, $F(1, 415)$=5.84, p=.02, d=.01), although the effect was small. Hence, caution should be taken in interpreting findings with this value. Yet for most of the values (nine out of ten) there were no differences as a function of attrition.

        Measures. Participants completed the 40-item Portrait Value Questionnaire (PVQ) (Schwartz, Melech, Lehmann, Burgess, & Harris, 2001). This questionnaire assesses the 10 values in the Schwartz (1992) value model. Each item describes a person in terms of values. For example, "(the person) wants everyone to be treated justly, even people he or she doesn't know. It is important to (this person) to protect the weak in society". Participants rated "how much is this person like you" on a 6-point scale (from *not at all like me* to *very much like me*). Three to five items measure each of the ten values, and Schwartz (2005) reports internal reliabilities between .49 and .77. In our sample, reliabilities ranged from .58 to .82.   As in Studies 1 and 2, we centered all items around participants' personal mean value across the entire questionnaire, such that scores reflect priorities over the person's other values.

Results and Discussion

        Evidence in line with value-based self-selection. We compared the values of our participants to the values of the sub-sample from Poland in the ESS of approximately the same age range (20 to 40). The PVQ-21 (see, e.g., Schwartz, 2012), which is a shorter version of the PVQ including 21 items, was used in the ESS. Thus, to maximize the validity of the comparison, in all our comparisons with ESS samples we used indexes of the 10 values based only on the 21 items that were also included in the ESS. MANOVA indicated that the value profile of Polish migrants at Time 1 was significantly different from that of people in Poland ($F(10, 610)$=28.27, p=1.38E-44, d=.32). More importantly, this was also the case when only the hypothesized values were included in the analysis ($F(8, 612)$=29.93, p=1.46E-39, d=.28). The first column in Table 4 presents the mean differences between values of our

sample of Polish migrants and those of the sample from Poland in the ESS, such that

differences were computed as values of Polish migrants minus values of respondents in

Poland. Expected differences in line with self-selection are in bold. Univariate analyses

conducted as part of the MANOVA that included all ten values indicated that six of the eight

expected value differences are significant and in line with self-selection. Specifically,

compared to the ESS sample (i.e., people in Poland), Polish migrants attributed significantly

more importance to the values of self-direction and stimulation; and significantly less

importance to the values of power, security, conformity, and tradition. Hence, overall the

findings are consistent with value-based self-selection. Contrary to self-selection, Polish

migrants did not attribute significantly more importance to hedonism than residents of

Poland. However, this makes sense as migrants usually have quite difficult lives after

migration, as it takes time to settle down, find a suitable job, and have a comfortable life.

Hence, people who value hedonism highly and therefore seek immediate gratification of

desires might be hesitant to put themselves in this difficult situation. Although hedonism

values were more important to participants who did not complete all waves of assessment, the

difference between migrants and non-migrants remains non-significant even when including

drop-outs. This reduces the chances that attrition is an alternative explanation to this finding.

The other value for which a self-selection hypothesis was not confirmed is benevolence -- it

did not differ significantly between Polish migrants and the ESS sample in Poland, although

the difference was in the direction in line with self-selection (M=.61 vs. .51, SD=.64 vs. .58,

respectively). Still, overall the findings show support for value-based self-selection.

Evidence in line with value socialization. A repeated-measures MANOVA on the

ten values and the three times of assessment revealed an overall effect of time on the profiles

of the values ($F(19, 132)$=8.69, p=1.82E-15, d=.56), suggesting that there was an overall

change in values across the three times of assessment. More importantly, the same effect was significant when including only the key values ($F(16, 135)=6.62$, $p=7.28\text{E-}11$, $d=.44$).

As attrition analyses revealed more attrition in participants with lower levels of education, we used a MANOVA to examine if an interaction term comprised of education x time would moderate value change. This interaction was not significant ($F(16, 134)=1.43$, $p=.14$) suggesting that this attrition bias did not systematically affect value change and consequently does not limit the validity of the findings.

Table 4 presents the mean importance of values of our sample of Polish migrants in Time 1, Time 2 and Time 3, as well as the mean difference between Time 3 values and Time 1 values (calculated as Time 3 minus Time 1), and the longitudinal (test-retest) correlations of values between Time 1 and 3. Univariate tests across the three times revealed that only two values, self-direction and power, changed significantly across times, and both changed linearly ($F(1,150) = 9.57$, $p = .005$ and $F(1,150) = 25.42$, $p = 8.48\text{E-}7$, respectively). However, when we ran the same MANOVA on the hypothesized values excluding these two values there was still a significant effect of time ($F(14, 137) = 3.17$, $p = .0003$, $d = .24$). This suggests that the significant effect of time was not driven solely by changes in power and self-direction values. We complemented these analyses with pairwise comparisons between each pair of times with Bonferroni corrections, and significant changes are noted on Table 4.

The first value that changed significantly, self-direction, was one of the values expected to increase based on socialization effects. Comparing self-direction values in Time 1 and 3 to the values of respondents of the same age range from Britain, the difference between the Time 1 value importance of Polish migrants and the sample from Britain was not significant ($M=.41$ vs. $.48$, $SD=.77$ and $.75$, respectively, $F(1, 725)=1.00$, $p = .32$). By Time 3, the importance of self-direction values to Polish migrants had increased beyond its level of importance in Britain, and had actually become significantly more important to our Polish

migrants at Time 3 compared to the ESS sample from Britain (M=.66 vs. .48, SD=.72 and

.75, respectively, $F(1, 725)$=7.31, p=.007, d=.01). Hence, our sample of Polish migrants was

more similar to people in Britain in prioritizing self-direction values upon arrival to Britain

than it was after a year and a half of living in Britain. It is possible that when people wish to

acquire the values of a new group they end up overcompensating (i.e., valuing the core values

of the group even more than is needed), in an attempt to fit in (see Cooper, Kelly, & Weaver,

2004). Alternatively, it may be that their increase in self-direction values was not due to

socialization but due to other adaptation processes (see Footnote 1 above). For example, it

may be that they found that they had more opportunities to pursue self-direction values such

as freedom and originality, and as a result of the ability to pursue these values, they became

more important to them (see Schwartz & Bardi, 1997).

The other value that changed significantly from Time 1 to 3 was power. As we found

that power values are less important in Britain than in Poland, a socialization process would

have led to a decrease in the importance of power values in Polish migrants. Yet, as column

1 of Table 4 shows, our sample of Polish migrants valued power significantly less than

people in Poland already in Time 1. In fact, in Time 1 our Polish migrants valued power

even less than ESS respondents from Britain (M=-1.39 vs. -.93, SD=1.16 and .83,

respectively, $F(1, 725)$=32.08, p=2.14E-8, d=.04). Hence, for their values to become more in

line with people in the Britain they would have had to increase in importance, and indeed

they did. Yet, at Time 3 they still valued power less than British respondents from the ESS

sample, although the effect size was small (M=-1.08 vs. -.93, SD=1.02 and .83, respectively,

$F(1, 725)$=3.89, p=.049, d=.005). Therefore, Polish migrants became more similar to people

in Britain in valuing power, in line with a socialization process.

To see if there was a general trend to become more similar to people in Britain in

value profiles, we compared the overall value profile of respondents to the ESS in Britain (of

the same age range as our sample of Polish migrants) to our Polish migrants at Times 1, 2,

and 3. We therefore ran three MANOVAs, one for each time of assessment, each comparing

the sample of Polish migrants to responses to the ESS from Britain, to see if the effect size of

the overall differences between these groups across values becomes smaller with time. The

overall difference in the ten values was largest at Time 1 ($F(10, 716)=31.50$, $p=1.27E-50$, $d=$

.31), smaller at Time 2 ($F(10, 716)=25.09$, $p=6.51E-41$, $d=.26$), and smallest at Time 3 ($F(10,$

$716)=13.72$, $p=2.76E-22$, $d=.16$). Therefore, in general, there is evidence for mean level

value change towards socialization of values into Britain.

As in the first two studies, Study 3 provided evidence in line with value-based self-

selection, but in this study we also found overall value socialization into a new, self-chosen

life setting. We suggest this occurred because the life transition examined in Study 3

involved a greater number of life changes.

General Discussion

This paper provided the first longitudinal evidence for value-based self-selection vs.

value socialization across self-chosen life transitions. Across all three life transitions, we

consistently found evidence in line with value-based self-selection. In comparison, the

evidence for value socialization was not consistent across the three life transitions. Instead, it

appeared to be a function of the number of aspects of life that were bound to change as part

of the transition. Specifically, we found no evidence for socialization in the vocational

transition which mainly led to one life change (working day activity). We found some

evidence for value socialization for some people (as a function of career considerations)

during the educational transition which involved changes to slightly more aspects of life

(working day activity, social environment, and usually place of residence). We found the

strongest evidence for value socialization during the migration transition which involved

changes to the most aspects of life (working day activity, social environment, place of

residence, culture, language, media, and public services). Yet this effect became evident mainly when examining the entire profile of values relevant to the life transition. This pattern of findings suggests that value socialization does not always occur in self-chosen life transitions. It may be more likely to occur when the life transition prompts changes in many aspects of life. We next discuss the implications of these findings, their limitations, and the future directions that follow from them.

Value-Based Self-Selection into Life Transitions

Across the three life transitions there was evidence in line with value-based self-selection. People embarking on these life transitions already held the values that were pivotal to their new life setting. In fact, in Study 2 we found value-fit to the new life setting even before the life transition started. As we focused on self-chosen life transitions it makes sense that people considered their values, and their fulfillment potential in the new life setting.

As our designs were correlational, we cannot provide unequivocal proof that the decision to enter the new life setting was a result of personal values. Indeed, as values are meaningfully linked with traits and needs (e.g., Bilsky & Schwartz, 2008; Vecchione et al., 2011), it is possible that people make their decisions on the basis of their traits and needs, and the link we find with values is a result of other aspects of their personality. Yet, replicating this effect across three different life transitions demonstrates there is a tendency for values to fit a new self-chosen life setting already at its early stages. This is important even without a claim for causality, as people are happier when they are in life settings that fit their values (Sagiv & Schwartz, 2000), and they are likely to function better in such environments.

Value Socialization into Self-Chosen Life Settings

We provided the first longitudinal evidence for value socialization during a life transition. Yet this effect was only evident in the life transition that encompassed most (if not all) life aspects -- after immigration. It seems that the magnitude of value socialization

mirrors the magnitude of change to the life of the person. As values have a tendency to be stable (Bardi & Goodwin, 2011), it is possible that only when many aspects of life change, people's values change to fit the new life setting. If only one or two aspects of life change, people can still pursue their existing values in the aspects of life that have not changed. This may be particularly true for self-chosen life transitions, because there is already some fit of values to the new life-setting and there is therefore less need for values to change. Future research should therefore examine value socialization in imposed life transitions.

It is also possible that value socialization does occur in life transitions that change fewer aspects of one's life, provided that these are important aspects, like one's work. Yet such change may take longer. Future research is needed to examine this. Indeed, socialization effects of personality traits have been found by using longer time frames. Specifically, Roberts (1997) found work experiences effects on traits between young and middle adulthood, but not over several years during young adulthood. Another study did find socialization effects of personality traits in the course of nine months, but this was in a life transition that affected more aspects of life (military training that included living on the premises (Jackson et al., 2012)). This provides further support for the idea that the magnitude of personality socialization mirrors the magnitude of the life change.

Comparing values to other aspects of the personality, it is possible that traits and attitudes change more readily than values. With regard to traits, as trait items already include recurring behaviors, socialization of traits can be the result of increased frequency of ongoing behaviors required by the new life setting. In contrast, there are no behavior items in value questionnaires. Hence, values are more clearly distinguished from behaviors in their measurement. This means that even if a behavior increased in frequency, the corresponding value could still stay the same. Moreover, many behaviors can express different values for different people (see discussions in Bardi & Schwartz, 2003; Maio, 2010); hence a change in

behavior might not always entail a clear consequence for a particular value. Attitudes are also clearly distinguished from behaviors. However, attitudes may be more amenable to change than values because they are more context-specific and are in more peripheral positions in the self (see Brewer & Roccas, 2001). Specifically, because values are broader, they are likely to have more links with many other related concepts in people's core schemas, and should therefore be more difficult to change (Bardi & Goodwin, 2011). This difference between values and attitude change has not been studied directly in the past and is an important future direction for research.

Above, we reasoned that our choice of using an objective standard of socialization (i.e., external to the participant) is based on our aim to test actual socialization, rather than progress towards the values that participants perceived as important in the new life setting. Testing the latter is worthy of future research that may result in different findings.

Additional Limitations and Future Directions

Attrition. Attrition is an inevitable feature of longitudinal research (Mroczek, 2007). Although we made efforts to retain participants, these attempts were not always successful and the studies included significant levels of attrition. Yet, non-response is not a weakness unless there is systematic difference between those who responded and those who did not (Schwarz, Groves, & Schumann, 1998). Across the three studies, there were only 2 (out of potentially 40) differences in values between participants who completed all waves of assessment and those who dropped out. In both cases, these differences did not endanger the validity of the conclusions, because they would have either made the (null) finding clearer than without drop-outs (hedonism in the migration study) or because the value in question was not part of the hypotheses (tradition in psychology students).

Across the three studies, there was only one occasion in which participants who dropped out differed in a demographic characteristic from those who completed all waves of

assessment. Specifically, in the migration study, those who dropped out were less educated on average than those who remained in the study. Yet, our statistical analyses suggested that this did not affect the results as education level did not interact with the other effects. Thus, although there was attrition in our studies, the evidence does not suggest reduced validity of the research. Still, there is always the possibility that a variable that we did not measure might have revealed selective attrition. Hence it is important in future studies to take more measures to retain participants and to measure variables that could point to selective attrition.

Timing of the Time 1 measurement. Our Time 1 measurements were always shortly after the life transition had already started. This timing was chosen because values are not believed to change rapidly, and as there was no access to participants before the transition started. Is it possible that by then values have already changed to fit the life transition better? Potentially, values could have changed in the time between making the decision to embark on the life transition and actually starting it. This could have happened through post-decision cognitive dissonance (Festinger, 1957), such as by strengthening the conviction that one has made the correct decision through value change to fit this decision better. Although this is theoretically possible and future studies should aim to provide pre-transition measurements, our data of participants before the transition in Study 2 did not find any evidence for pre-transition socialization, thereby increasing the confidence in our conclusions.

To conclude, this research provided strong support that people's values are compatible with self-chosen life settings already at early stages of the life transition. It seems that people tend to enter new life settings which provide a good fit to their values. This leaves little need for value socialization. Still, when many life aspects are affected by the transition some value socialization does occur, suggesting that the extent of value socialization mirrors the extent of changes that the life transition entails.

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Table 1

Study 1: Value Mean Importance across Times, Differences from ESS, and Longitudinal

Correlations

Values	Mean Importance (STD)				Longitudinal
	Value △ Training Onset and ESS	Training Onset	Nine Months into the Training	Value △ between times	Correlations
Benevolence	-.09	.83 (.55)	.78 (.57)	-.05	.59
Universalism	-.49***	-.18 (.54)	-.26 (.66)	-.08	.76
Self-Direction	**-.21***	.17 (.72)	.27 (.63)	.10	.70
Stimulation	.12	-.08 (1.15)	-.07 (1.08)	.01	.60
Hedonism	.16	.20 (.94)	.43 (1.00)	.23	.67
Achievement	.32***	.34 (.81)	.30 (.78)	-.04	.57
Power	**.56*****	-1.77 (1.21)	-1.77 (1.26)	.00	.53
Security	.12	.58 (.66)	.75 (.70)	.17	.12
Conformity	**.73*****	.49 (.74)	.32 (.82)	-.17	.66
Tradition	-.46***	-1.11 (.91)	-1.27 (.99)	-.16	.82

Note. Value importance is centered on the personal mean importance across all values. Value △

training onset and ESS is calculated as the algebraic difference of the z-scores of values of

police trainees at the start of the course minus the z-scores of values of the ESS sub-sample

from the United Kingdom, with expected value differences based on self-selection in bold.

Value △ between times is the algebraic difference of the later time minus training onset value

scores.

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

Table 2

Study 2: Value Differences between Psychology and Business Students, Psychology Students'
Value Mean Importance across Times, and their Longitudinal Correlations.

Values	Value △ Psychology and Business Students at Year 1	Mean Importance (STD)				Longitudinal Correlations Year 1-3
		Year 1	Year 2	Year 3	Year 1-3 Value △	
Benevolence	**.46*****	.89 (.67)	.91 (.69)	.90 (.73)	-.01	.48
Universalism	**.51*****	.11 (.72)	.18 (.79)	.04 (.76)	-.07	.58
Self-Direction	.24**	.57 (.65)	.46 (.65)	.54 (.66)	-.03	.44
Stimulation	-.33*	-.24(1.01)	-.19 (1.00)	-.01 (1.04)	.23**	.50
Hedonism	**-**.32*	.43 (1.05)	.43 (1.07)	.62 (1.05)*	.19*	.49
Achievement	-.07	.47 (.68)	.38 (.69)	.43 (.77)	-.04	.34
Power	**-1.19*****	-2.02 (1.30)	-1.93 (1.22)	-1.87 (1.26)	.15	.50
Security	-.06	.14 (.71)	.01 (.74)	.23 (.71)**	.09*	.39
Conformity	-.22	.15 (.81)	.26 (.77)	.05 (.90)*	-.10*	.45
Tradition	-.09	-1.16 (.95)	-1.15 (.94)	-1.38 (1.43)	-.22	.50

Note. Value importance is centered on the personal mean importance across all values. Value △

psychology and business students at Year 1 is calculated as the algebraic difference of the

values of psychology students at Year 1 minus the values of business students at Year 1, with

expected value differences based on self-selection in bold. Year 1-3 Value △ is the algebraic

difference of Year 3 minus Year 1 value scores.

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

Table 3

Study 2: Business Students' Value Mean Importance across Times and Longitudinal

Correlations.

Values	Mean Importance (STD)				Longitudinal
	Time 1	Time 2	Time 3	Time 1-3 Value △	Correlations Time 1-3
Benevolence	.43 (.80)	.35 (.78)	.30 (.64)	-.13	.44
Universalism	-.40 (.62)	-.34 (.79)	-.28 (.71)	.12	.60
Self-Direction	.33 (.58)	.40 (.59)	.36 (.53)	.03	.55
Stimulation	.09 (1.05)	-.08 (1.11)	.18 (.99)*	.09	.40
Hedonism	.75 (.97)	.99 (1.14)	.75 (1.09)	.00	.58
Achievement	.54 (.73)	.57 (.84)	.58 (.67)	.04	.44
Power	-.83 (1.41)	-.99 (1.37)	-.78 (1.12)	.05	.52
Security	.20 (.71)	.34 (.84)	.31 (.80)	.11	.53
Conformity	.37 (.96)	.23 (.86)	.09 (.81)	-.28*	.49
Tradition	-1.07 (.97)	-.1.19 (1.12)	-.1.15 (.99)	-.08	.63

Note. Value importance is centered on the personal mean importance across all values. Time 1-3

   Value △ is the algebraic difference of Time 3 minus Time 1 value scores.

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

Table 4

Study 3: Value Mean Importance across Times, Differences from ESS, and Longitudinal

Correlations

Values	Value △ Time 1 and ESS-Polish	Mean Importance (STD)				Longitudinal Correlations Time 1-3
		Time 1	Time 2	Time 3	Time 1-3 Value △	
Benevolence	**.10**	.38 (.58)	.38 (.60)	.40 (.62)	.02	.54
Universalism	.02	.41 (.61)	.43 (.61)	.45 (.68)	.04	.66
Self-Direction	**.17****	.57 (.57)	.64 (.59)	.72 (.62)	.15**	.50
Stimulation	**.47*****	.09 (.78)	-.01 (.77)	.06 (.70)	-.03	.59
Hedonism	**-.06**	-.61 (1.00)	-.70 (.98)	-.67 (.93)	-.06	.63
Achievement	.04	.11 (.81)	.10 (.80)	.21 (.73)	.10	.54
Power	**-.73*****	-1.20 (1.03)	-1.00 (.97)**	-.86 (.82)	.34***	.63
Security	**-.25****	.24 (.66)	.20 (.53)	.30 (.63)	.06	.69
Conformity	**-.49*****	-.04 (.73)	-.11 (.73)	-.02 (.69)	.01	.59
Tradition	**-.44*****	-.65 (.81)	-.64 (.88)	-.58 (.89)	.07	.69

Note. Value importance is centered on the personal mean importance across all values. Value △

Time 1 and ESS is calculated as the algebraic difference of the values of Polish migrants

shortly after arrival to the United Kingdom (using only items from the PVQ21) minus the

values of the ESS sub-sample (PVQ21) from Poland, with expected value differences based on

self-selection in bold. Time 1-3 Value △ is the algebraic difference of Time 3 minus Time 1

value scores. Significant changes from the previous time are noted.

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

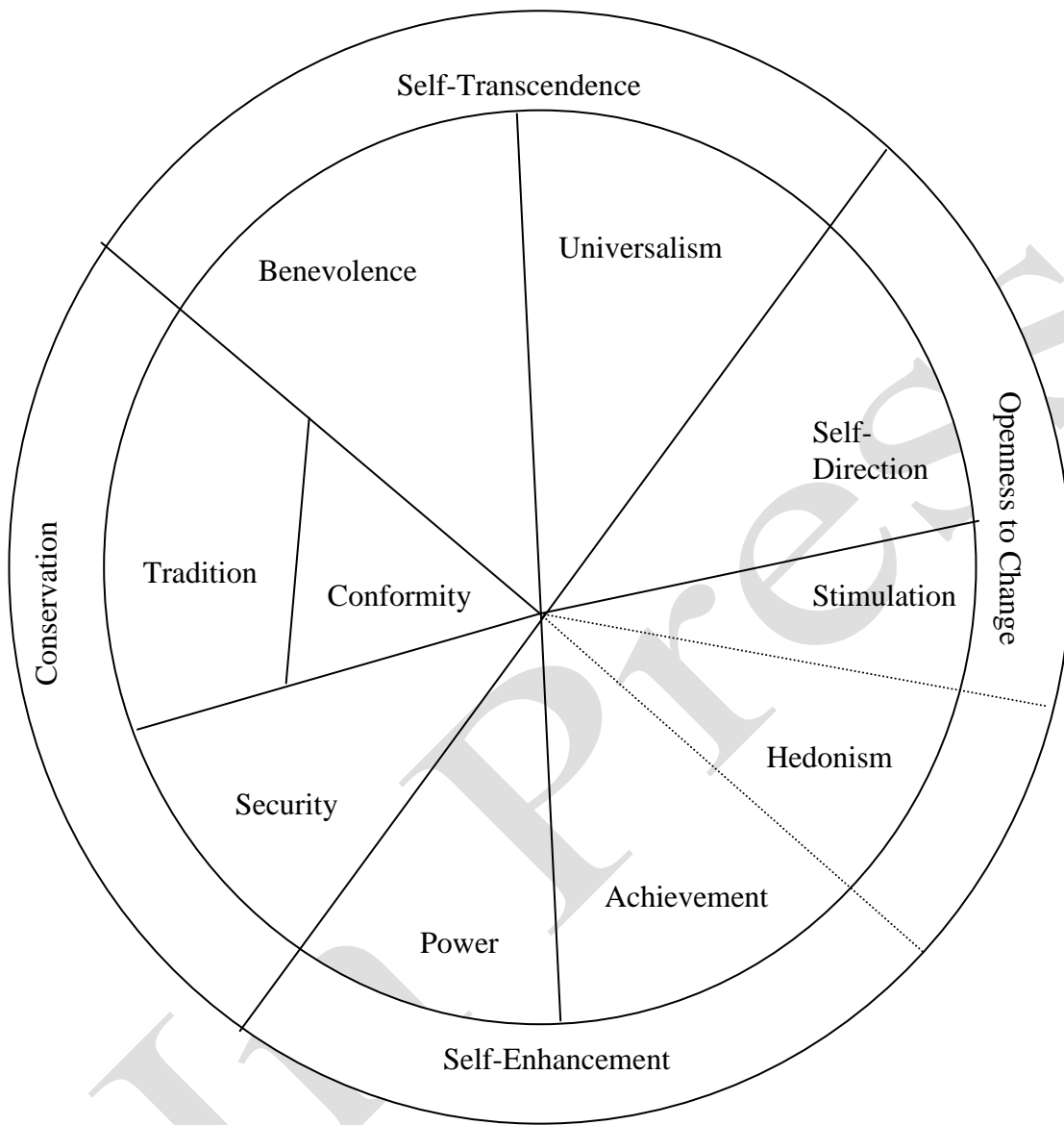**Figure Captions**

Figure 1. The structure of values (Schwartz, 1992).

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