The cultural dimension of tightness–looseness: An analysis of situational constraint in Estonia and Greece

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*T*he importance of tightness–looseness as a dimension that explains a considerable amount of variance between cultures was demonstrated by Gelfand et al. (2011). Tight nations have many strong norms and a low tolerance of deviant behaviour, whereas loose nations have weak social norms and a high tolerance of deviant behaviour. The main aim of the current studies was to examine situational constraint in Estonia and Greece: that is, how the cultural dimension of tightness–looseness is manifested in everyday situations in those two countries. The findings of a questionnaire study (Study 1) suggested that, in general, there is higher constraint across everyday situations in Greece than in Estonia, but situational constraint in Greece is especially strong in school and organisational settings where people have hierarchically structured roles. The results of an observational study (Study 2) revealed a relatively high agreement between appropriateness of certain behaviours as judged by the respondents in Study 1 and the frequencies of observed behaviours in the two countries. Our findings suggest that the strength of situations may substantially vary both within and across cultures, and that the attitudes of the members about situational strength in their respective cultures are in concordance with observations of situations by neutral observers in how people in general behave in their culture.

Keywords: Cultural dimensions; Tightness–looseness; Situational constraint.

There have been valuable contributions in the study of culture that have identified its main characteristic attributes, focusing on social relations (Fiske, 1992), cultural syndromes (Triandis, 1996), cultural and work-related values (Hofstede, 1980, 2001; Inglehart & Baker, 2000; Schwartz, 1994), social axioms (Leung & Bond, 2004) and moral attitudes (Minkov, Blagoev, & Hofstede, 2012). The dimension of individualism–collectivism has been the most popular and has been commonly used in numerous studies focusing on both theoretical and methodological issues (see Kagitçibasi, 1997; Realo, 2003; Taras et al., 2014; Triandis, 1995 for extensive reviews of the subject). Many in cross-cultural psychology have argued, however, that an exclusive focus on individualism–collectivism limits the field and that we need to "expand the cultural toolkit" (Bond, 1997). In this article, we focus on tightness–looseness as a promising

dimension to understand cultural variation, building on previous work (Chan, Gelfand, Triandis, & Tzeng, 1996; Gelfand et al., 2011; Harrington & Gelfand, 2014).

The relevance of tightness–looseness as a classification model of cross-cultural differences in 33 nations was rigorously demonstrated by Gelfand et al. (2011). As argued by Gelfand et al. (2011), tightness–looseness refers to "differences between nations that are tight (have many strong norms and a low tolerance of deviant behaviour) versus loose (have weak social norms and a high tolerance of deviant behaviour)" (p. 1100). Tightness–looseness was found to be related to, but still distinct from, other famous cultural dimensions such as Hofstede's (1980) individualism–collectivism ($r = -.47$, $p < .01$) and power distance ($r = .42$, $p < .02$), for instance. Despite strong conceptual similarities, there was no significant

relationship between tightness–looseness and Hofstede's dimension of uncertainty avoidance ($r = .27$, $p = .160$); a potential reason for the lack of relationship being that "because tight societies have many clear norms, stress deriving from uncertainty may be dramatically reduced among its citizens" (Gelfand et al., 2011, p. S6). In Gelfand et al.'s (2011) study, the Ukraine, Estonia, Hungary and Israel were the loosest, whereas Pakistan, Malaysia, India and Singapore were the tightest among the 33 nations.

A contribution in Gelfand et al. (2011) was to introduce the idea that cultures vary in *situational strength* (Mischel, 1977), with tight cultures having a preponderance of strong situations and loose cultures having a preponderance of weak situations. In this article, we build on this former work and provide further validity for the notion that cultures vary in situational strength. We specifically examine how the cultural dimension of tightness–looseness is manifested in the strength of socially constructed situations or the range of behaviours that are permitted across situations in two fairly different European countries—Estonia and Greece. To this aim, both questionnaire and observational data will be used that allows us to examine the correspondence between self-reported attitudes and actual behaviour with respect to the situational constraint aspect of tightness–looseness.

Development of the concept of tightness–looseness and its defining attributes

From a comparative point of view, an American-Finnish anthropologist Pertti J. Pelto (1968) was the first to suggest that tightness–looseness is an important cultural dimension that could be relevant for comparing different societies. For about 30 years, as Pelto argued in 1968, anthropologists had been extensively classifying societies as "tight" or "loose" but had used quite different criteria for assigning these descriptive labels. To take steps towards an operational definition of the dimension, he tried to pinpoint the sociocultural features that would define a society as tight or loose. He examined a set of 30 societies and, leaving aside criteria that seemed to be too vague (e.g. "deviant behaviour is easily tolerated"), focused on concrete structural features of the social order, namely: the communal ownership of economic resources, the corporacy of kin groups (i.e. whether the group operates as a single social body, or as a collection of individuals), and the community hierarchy of religious and civil authority. As he was not able to find necessary information about all the 30 societies, he focused on more recent ethnographic reports from 21 societies. In Pelto's analysis, the Hutterite and the Hano communities (Tewa Indian village in Arizona) ranked tightest and Kung bushmen of South Africa and Skolt Lapps of Finland loosest.

The tightness–looseness was further elaborated by Harry C. Triandis (1994, 1996) according to whom tightness–looseness is one of the three cultural syndromes (the other two being individualism–collectivism and complexity), that is, is a pattern of shared attitudes, beliefs, categorisations, self-definitions, norms, role definitions and values that are organised around a theme that can be identified among those who speak a particular language and live together in a given historical period in a given geographical region. By "tight" Triandis (1994, 1996) and Chan et al. (1996) referred to cultures in which norms are clearly defined and where there is little tolerance for deviance from norms. By contrast, "loose" cultures are those in which norms are not clearly defined, and where is tolerance for deviance from norms. This definition suggests that in tight cultures there are fewer appropriate ways to respond to a particular situation compared to loose cultures. As two extreme examples on this dimension, Triandis has named Japan as being a very tight culture and Thailand as a relatively loose culture. Later work by Carpenter (2000) differentiated tightness–looseness and individualism–collectivism. Chan et al. (1996) also argued that tightness–looseness may be relevant to an even broader range of situations than individualism–collectivism because the latter is based mainly on the ingroup–outgroup distinction but the former on the rules and norms that are held by society in general.[1]

Multilevel theory of cultural tightness–looseness

In our research, we proceed from the multilevel theory of cultural tightness–looseness, elaborated by Gelfand and colleagues (Gelfand, Nishii, & Raver, 2006; Gelfand et al., 2011) where "tightness–looseness is part of a complex, loosely integrated system that involves processes across multiple levels of analysis" (p. 1101). A multilevel theory of cultural tightness–looseness builds on the ecological approach (e.g. Georgas & Berry, 1995), which seeks to understand the psychological phenomena linked to culture-level phenomena such as history, social structure and other socioecological factors. It is an integration and extension of earlier theoretical and empirical work by Pelto (1968), Boldt (1978), and Triandis, 1996.

Gelfand et al. (2006, 2011) argued that, when discussing tightness–looseness, both distant ecological and historical factors and societal processes

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[1] See Minkov et al. (2012) for a different view on this issue.

(such as ecological and historical threats, for instance and the strength of societal norms) as well proximal/contemporaneous processes (i.e. the structure of everyday situations and degree of situational constraint, as well as psychological adaptations) should be considered.

First, specific ecocultural and historical factors were shown to create the need for predictability and order within cultures. For instance, ecological and sociopolitical factors, such as population density, food deprivation, territorial threats from neighbours and proneness to ecological disasters, were found to be the antecedents of tightness–looseness, as they relate to the need for structures to maintain order and enhance predictability of the environment (Gelfand et al., 2011). A recent study by Mrazek, Chiao, Blizinsky, Lun, and Gelfand (2013) further showed that cross-national variation in tightness–looseness is influenced by susceptibility to ecological threat, whereas the relationship is mediated by the frequency of the S-allele at the serotonin transporter gene 5-HTTLPR. However, the tolerance of deviant behaviour and strength of social norms are also reflected in societal institutions and practices. For instance, cultural tightness has been related to higher levels of religiosity, stronger laws and regulations, less open media, stricter punishments and lower crime rates (Gelfand et al., 2011), as well as with higher impact terrorist episodes (i.e. with a greater number of fatalities per incident; Gelfand, LaFree, Fahey, & Feinberg, 2013) and lower levels of happiness (Harrington & Gelfand, 2014), just to name a few. Furthermore, cultural tightness–looseness has even been shown to moderate the effects of cultural values at the national level, with individualism–collectivism and power distance (among other value dimensions) having significantly stronger effects on various outcomes in culturally tighter than looser countries (Taras, Kirkman, & Steel, 2010). A recent analysis (Harrington & Gelfand, 2014) also showed that tightness–looseness explains variation in ecological and historical factors, personality and outcomes in the 50 United States.

This study, however, is mostly interested in how cultural tightness is manifested in the strength of socially constructed situations, or the range of behaviours that are permitted across situations within cultures (Price & Bouffard, 1974). This structure of social situations is assumed to be an important mediator between ecocultural and psychological processes. Social situations within tight cultural systems are strong in that such situations are more likely to induce invariant expectancies about appropriate behavioural responses, and provide sufficient incentives for the performance of those response patterns (Mischel, 1977). In other words, strong situations "prescribe and limit the range of expected and acceptable behaviour" (Mischel, 1977, p. 347), leaving little room for individual discretion in determining behaviour.

Because strong situations are associated with such clear behavioural demands, deviations from expected patterns are associated with an increased propensity for social censure. On the contrary, in weak situations, the range of possible behaviours is broad, and there are few external constraints put on individuals (Mischel, 1977). To put it simply, strong situations have high *situational constraint* (Price & Bouffard, 1974), and limit the range of tolerable behaviour. In Price and Bouffard's (1974) study, the so-called strongest situations were job interviews and church services, whereas the weakest situations involved being in one's own room or in a public park. As predicted, Gelfand et al. (2011) found much higher situational constraint in tight nations and much lower constraint across various everyday situations in loose nations. In this study, however, we will take a step further and examine how the cultural dimension of tightness–looseness is manifested in specific everyday situations in two culturally diverse European countries—Estonia and Greece. Differently from many earlier studies on tightness–looseness, we will not only use the data of a questionnaire survey, but we will also examine the situational constraint aspect of tightness–looseness in real-life situations in the abovementioned two countries. Using both self-report and observational data will allow us to examine if the attitudes of people living in Estonia and Greece regarding situational constraint are in concordance with how people in general behave in their culture.

The position of Estonia and Greece on the tightness–looseness dimension

In their socioecological model Georgas and Berry (1995) proposed that, in selecting the cultures or societies to be studied in cross-cultural research, one should first consider their ecological and social characteristics as well as how these characteristics are related to research hypotheses and psychological variables. Therefore, the choice of the cultures in this study was primarily driven by their considerable differences in the ecological and social indicators that are relevant to the tightness–looseness dimension. By doing so, one can go beyond a mere description of mean differences and, thus, avoid the *onomastic fallacy*—using the name of a culture as a substitute for the interpretation of the cultural variables that account for the phenomena—a tendency that cross-cultural psychologists have repeatedly been cautioned to avoid (Georgas & Berry, 1995).

In this study, we focus on a comparison of the strength of socially constructed situations in two cultures, Estonia and Greece, that differ greatly across many sociodemographic, cultural and ecological indicators that have been related to tightness–looseness in the cross-cultural literature (Chan et al., 1996; Gelfand et al., 2011). For

instance, Greece is considerably more homogeneous than Estonia in terms of both ethnic and religious composition.[2] Also, the population density of Greece and Estonia differs by more than two times, with Estonia (33.2 persons per km^2) being more loosely inhabited than Greece (82.9 persons per km^2). Another remarkable difference between the two countries can be found in the proneness to ecological disasters: according to the International Disaster Database EM-DAT (www.emdat.be), Estonia appears to be one of the safest countries in the world, as there are no records in the database of any fatal earthquakes, droughts, floods, storms or volcano eruptions between the years of 1900 and 2014. In Greece, however, more than 300 people have been killed and about 1,000,000 people have been affected by different natural disasters, such as earthquakes, volcano eruptions, storms, wildfires and extreme temperatures during the same period of time. However, the absence of ecological or natural disasters does not mean Estonia is entirely safe: the number of recorded homicides and robberies per 100,000 inhabitants (2008) is considerably larger in Estonia (6.3 and 68, respectively) than in Greece (1.1 and 23, respectively; www.undp.org/). Finally, according to Hofstede's data (2001), Greece scores the highest on uncertainty avoidance (i.e. "the extent to which the members of a culture feel threatened by uncertain or unknown situations" [p. 161], which is reflected in a stronger rule orientation and search for stability) among more than 50 countries, whereas Estonia could be better described as a weak uncertainty avoidance culture. Estonia and Greece differ also in terms of power distance (i.e. the extent to which the differences between those in superior and subordinate positions are emphasised), with Greece having a considerably higher score than Estonia on this dimension (Hofstede, 2001).

Estonia and Greece, thus, provide an interesting pair for comparison given their large differences in several ecological, cultural and social indicators relevant to the tightness–looseness dimension. Greater internal homogeneity, both in terms of ethnic and religious composition, higher religiosity and population density, proneness to natural disasters, greater uncertainty avoidance and power distance, yet lower homicide and robbery rates speak in favour of tighter tendencies in Greece. Indeed, in the abovementioned study by Gelfand et al. (2011), Estonia was one of the loosest nations (ranking 32nd among the 33 nations), based on the mean score of the six items that "assessed the degree to which social norms are pervasive, clearly defined and reliably imposed within nations" (p. 1102). Greece, as expected, was tighter, ranking 25th among the 33 nations. Although on a global

scale (in comparison with South Asian countries, for instance), both Greece and Estonia appear to be rather loose than tight, it is still possible that the cultural dimension of tightness–looseness is manifested in different ways across everyday situations in the two countries given their substantial differences in abovementioned ecological, cultural and social indicators.

Aims of the studies

This article consists of two studies. The main aim of the first study was to examine the strength of socially constructed situations in Estonia and Greece using self-report questionnaires. Are behavioural constraints stronger in certain situations in Greece but in other situations in Estonia? Are there certain domains or situations that are tight or loose in both Estonia and Greece? These are just a couple of the questions we tried to answer in this study. On the basis of the above information, we propose the following hypotheses:

(1) All in all, there is higher constraint across everyday situations in Greece than in Estonia, as Greece appears to be a tighter culture in terms of the abovementioned ecological, cultural and social indicators, as well as the results of Gelfand et al.'s (2011) study.
(2) The strongest or the "tightest" situations in both Estonia and Greece are *job interviews* and *funeral ceremonies*, whereas the weakest ("loosest") situations in both countries are in *one's bedroom* and in a *public park* (cf. Price & Bouffard, 1974).
(3) Because of nation-level differences in power distance and uncertainty avoidance (Hofstede, 2001), situational constraints are stronger in Greece than in Estonia in school and organisational settings, such as *classroom/lecture hall*, *job interview* and *workplace*, where people have hierarchically structured roles, such as those of boss and subordinate, teacher and pupil, professor and student.

The second study was conducted with the aim to examine how the cultural dimension of tightness–looseness is manifested in a variety of everyday behaviours and situations in Estonia and Greece. For that purpose, an observational study was carried out in the capital cities of the two countries. We were also interested in examining whether and the extent to which the results of the attitudinal survey of tightness–looseness (i.e. Study 1) are in concordance with the results of the observational study. We expect that the mean scores of the appropriateness of the behaviours across situations, as judged by the

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[2] In Greece, 98% of the population consists of ethnic Greeks and 97% of the population belongs to the Greek Orthodox Church. In Estonia, however, merely 67% of the population consists of ethnic Estonians while the remainder is made up of Russians, Ukrainians and other ethnic groups. Regarding religion, only about 30% of the Estonian population claim to be of a certain faith/religion, with the dominant religious groups being Lutheran (13.6%) and Orthodox (12.8%) (Statistical Office of Estonia; www.stat.ee).

respondents of Study 1, will be positively related with the mean frequencies of the observed behaviours in the same situations, if the attitudes of the members of the particular culture are indeed concordant with how people, in general, behave in their culture.

STUDY 1

Method

Participants

Participants in this study were 200 Estonians (173 women and 25 men; two unspecified) whose ages ranged from 17 to 84, with a mean age of 33.6 years ($SD = 18.4$) and 276 Greeks (156 women and 120 men) whose ages ranged from 18 to 60, with a mean age of 30.9 years ($SD = 11.3$). Data were collected during the fall of 2001. In both the Estonian and the Greek samples, about half of the participants were students (from the University of Tartu and the University of Athens) and the rest comprised people from different educational and social backgrounds. All subjects volunteered to participate in the study and they received no payment for their participation. The data were collected as part of the worldwide cross-cultural research project on the cultural dimension of tightness–looseness initiated by the third author of this article, in which 33 cultures participated, including Estonia and Greece (see Gelfand et al., 2011).

Procedure and measures

The subjects were given a set of various questionnaires to test a multilevel theory of cultural tightness–looseness. All questionnaires were constructed especially for this study. The questionnaires took approximately 45 minutes to complete. All participants completed the same set of questionnaires either at their place of work or during classes at university. Respondents also indicated their age, sex, nationality, marital status, educational level, occupation, socioeconomic status and religious affiliation. The original English versions of the questionnaires were translated into Estonian by the first two authors of this study and into Greek by the local coordinator of the project. Questionnaires were then back-translated by bilingual translators and revised versions checked for accuracy. Translated versions of the questionnaires were found to be highly similar to their original counterparts in English. In this study, we only use the measure of tightness–looseness that was explicitly related to situational constraint.

The Situational Constraint Measure. The Situational Constraint Measure (SCM) is adapted from Price and Bouffard (1974) and was developed to assess cross-cultural differences in tightness–looseness operationalised as a "situational constraint" (see also Gelfand et al., 2011). Respondents were engaged in a paired comparison task, wherein they judged the appropriateness of 15 different everyday behaviours in 15 specific behaviour settings (situations). These situations were the following: *bank*, *bus*, *classroom/lecture hall*, *doctor's office*, *elevator*, *funeral ceremony*, *job interview*, *library*, *movies*, *one's bedroom*, *party*, *public park*, *restaurant*, *sidewalk* and *workplace*. Among behaviours were the following: *argue*, *bargain* (exchange goods, services or privileges), *blow nose*, *burp/belch*, *cry* (shed tears), *curse/swear* (use foul language), *eat*, *flirt*, *kiss* (on the mouth), *laugh out loud*, *listen to music on headphones*, *read a newspaper*, *sing*, *sleep* and *talk* (have a conversation).[3] The measure was preceded by the following instruction: "From various sources in our everyday lives we have all developed a subjective 'impression' or 'feeling' for the appropriateness of any given behaviour in a particular situation. In this study, we are interested in your judgement of the appropriateness of some particular behaviours in some particular settings." Consequently, respondents were asked to answer for each of the 225 questions "how appropriate is this behaviour in this setting" (e.g. "how appropriate is to *eat* in the *elevator*?" or "how appropriate is to *sing* at a *funeral ceremony*?") on a 6-point Likert-type scale ranging from 1 (*extremely inappropriate*) to 6 (*extremely appropriate*). The SCM data from Estonia and Greece were also included in Gelfand et al.'s (2011) analyses but only together with data from other countries with the aim to validate the 6-item tightness–looseness measure. In this article, however, a very detailed analysis of the SCM data from the two countries is provided that has not been published earlier and therefore, this study substantially complements and expands previous analyses on the same dataset.

Results

As the first step of the analysis, the mean scores of all 225 questions (i.e. 15 situations by 15 behaviours) of the SCM were calculated for both samples. An analysis of variance (ANOVA) showed that the mean score of the SCM was significantly higher for Estonians ($M = 3.66$, $SD = 0.53$) than for Greeks ($M = 3.22$, $SD = 0.51$), $F(1, 474) = 84.05$ ($p < .001$), eta squared (η^2) = .15. Such a finding supports our first hypothesis and suggests that, all in all, Estonians consider the 15 behaviours more appropriate across all 15

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[3] In Gelfand et al.'s (2011) study, only 12 of 15 behaviours were used in the analyses; the three behaviours not included in the analyses were *blow nose*, *burp/belch* and *sleep*. The final list of situations (15) and behaviours (12) in Gelfand et al.'s study included only those stimuli that were translatable, relevant, unambiguous in all cultures and representative of a wide variety of behaviours and situations (see Gelfand et al., 2011, Supplementary Online Material, p. 9).

TABLE 1
Mean scores of the constrainedness of 15 situations across 15 behaviours for the Estonian and Greek samples

Situation	Estonian sample (n = 200)		Greek sample (n = 276)		F	p value	η²
	M	SD	M	SD			
Job interview	2.30	0.53	1.85	0.61	70.30	.000	0.13
Funeral ceremony	2.63	0.53	2.05	0.51	146.61	.000	0.24
Library	3.42	0.66	2.43	0.60	291.49	.000	0.38
Classroom/lecture hall	3.37	0.69	2.48	0.72	180.73	.000	0.28
Doctor's office	2.86	0.68	2.75	0.65	3.53	.061	0.01
Workplace	3.75	0.71	2.81	0.67	217.09	.000	0.31
Movies	3.27	0.72	2.87	0.68	38.83	.000	0.08
Bank	3.17	0.70	2.93	0.66	13.86	.001	0.03
Restaurant	3.75	0.60	3.39	0.58	41.23	.000	0.08
Elevator	3.80	0.73	3.45	0.71	27.71	.000	0.06
Bus	3.88	0.72	3.49	0.64	39.99	.000	0.08
Party	4.20	0.68	3.97	0.61	15.04	.001	0.03
City sidewalk	4.12	0.78	4.07	0.75	0.48	.490	0.00
Public park	4.82	0.61	4.51	0.73	23.37	.000	0.05
One's bedroom	5.54	0.45	5.23	0.67	33.20	.000	0.07

Note: Higher scores indicate less behavioural constraints in a certain situation. The situations are ordered from the "tightest" to the "loosest" in the Greek sample.

situations than Greeks, indicating that Estonia is indeed a looser society than Greece.

Next, the mean scores of the constrainedness of each of the 15 situations across the 15 behaviours were calculated for both samples. For instance, the mean score of the constrainedness of the situation *city sidewalk* was calculated by summing up the responses to the 15 items that asked about how appropriate a certain behaviour is on a *city sidewalk* and by dividing the score by 15. Higher scores indicate that more behaviours are appropriate in a certain situation (e.g. on a city sidewalk) across all 15 behaviours. In other words, the higher the score, the "looser" or weaker is the situation.

The Spearman rank order correlation between the mean scores of constrainedness of the 15 situations between the Estonian and the Greek samples was as high as ρ (15) = .90 (p < .001). Also, the extremes on the "tight–loose" scale were the same for the respondents of both samples, providing support for our second hypothesis: *job interview*, in first place, followed by *funeral ceremony*, were regarded as the "tightest" and, similarly, *one's bedroom* and *public park* as the "loosest" situations by the respondents of both samples. To put it differently, in one's bedroom or in a public park it is appropriate or acceptable to behave in various ways, in contrast to a job interview or funeral ceremony, where the number of the appropriate behaviours is far more restrained in both cultures.

However, a multivariate analysis of variance (MANOVA) revealed significant differences between the samples for all 15 situations, $F(15, 460) = 61.56$ (p < .001), Wilks λ = .33. As the country effect was significant, we continued with univariate analyses in order to identify the specific situations that contributed to the significant overall effect. A series of one-way

ANOVAs revealed statistically significant differences between the samples on all situations except for two: *city sidewalk* and *doctor's office* (see Table 1). Among the Greek sample, situational constraints were stronger in all situations compared to the Estonian participants, but most notably in *library* (η² = .38), *workplace* (η² = .31), *classroom/lecture hall* (η² = .28), *funeral ceremony* (η² = .24) and *job interview* (η² = .13). As observed in Table 1, these were among the six most constrained or "tightest" situations in the Greek sample. These findings provide partial support for our third hypothesis that, in hierarchically structured situations such as *classroom/lecture hall*, *workplace* and *job interview*, fewer behaviours are appropriate in Greece than in Estonia. However, in weaker or "looser" situations, as similarly judged by both samples, the differences in behavioural constraints between the Greek and Estonian samples are less pronounced (e.g. *one's bedroom*, *public park*, *party*) or not evident at all (e.g. *city sidewalk*).

Finally, we were interested in examining what appropriate and inappropriate behaviour is in those four situations—*library*, *workplace*, *classroom/lecture hall* and *funeral ceremony*—in which situational strength or constraint differed the most between the Greek and Estonian samples. A series of MANOVAs showed significant differences between the samples on all 15 behaviours in the four abovementioned situations, $Fs(15, 436) = 66.07$, 47.86, 51.22 and 47.90 (all significant at p < .001), Wilks λs = .30, .38, .36 and .38, respectively.

The mean scores of appropriateness of the 15 behaviours in the four situations for the Estonian and Greek samples are shown in Figure 1. The results of univariate ANOVAs showed that, in three situations (i.e. *library*, *workplace* and *classroom/lecture hall*) all 15
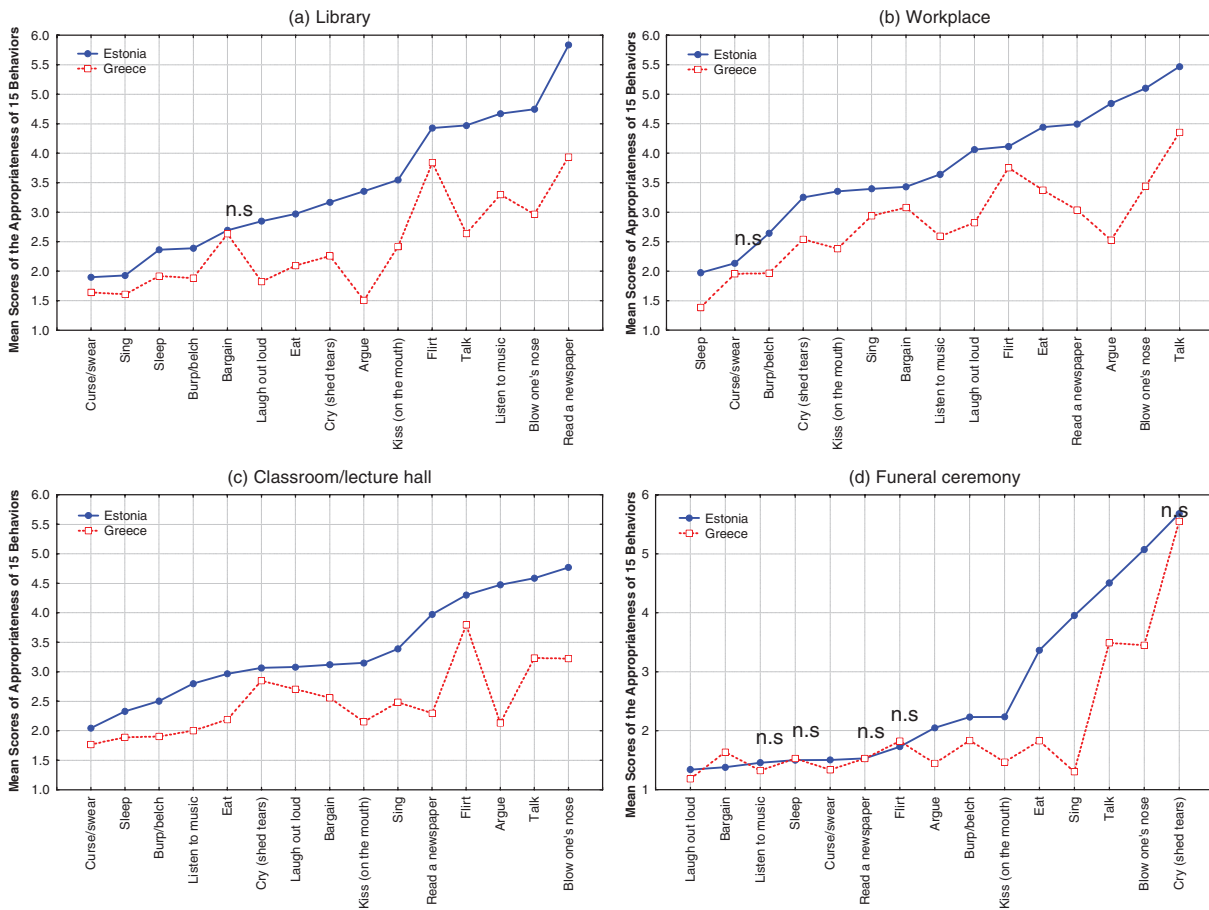
Figure 1. Mean scores of the appropriateness of 15 behaviours in the situations *library*, *workplace*, *classroom/lecture hall* and *funeral ceremony* for the Estonian (solid lines, filled circles) and Greek (dotted lines, empty squares) samples. For each situation, the behaviours are ordered by the mean scores of the appropriateness in the Estonian sample. Higher scores indicate that a behaviour is more appropriate in a certain situation. n.s = the difference is not significant at the $p < .05$ level.

behaviours except for two—to *bargain* at the *library* and to *curse/swear* in the *workplace*—were more appropriate for the Estonian respondents than for the Greek ones (all mean differences significant at $p < .0001$). In all three situations, the biggest differences between the samples occurred in the mean appropriateness of behaviours such as to *read a newspaper*, to *blow one's nose* and to *talk*, but most notably in the appropriateness of to *argue* in the *classroom/lecture hall*, $F(1471) = 535.08$, $p < .0000$, $\eta^2 = .53$, as well as in the *workplace*, $F(1473) = 481.72$, $p < .0000$, $\eta^2 = .50$.

In *funeral ceremony*, there were no statistically significant ($p < .05$) differences between the samples in the mean appropriateness ratings of the following behaviours: to *read a newspaper*, to *sleep*, to *flirt*, to *cry* and to *listen to music on headphones*. To *laugh out loud* appeared to be the most inappropriate behaviour at a *funeral ceremony*, whereas to *cry*, to *blow one's nose* and to *talk* fell among the most appropriate behaviours for both samples, as could be expected. Quite interestingly, however, the biggest cultural difference between Estonia and Greece

was in the behavioural act of *singing*, $F(1, 467) = 454.10$, $p < .00001$, $\eta^2 = .49$, which, according to the respondents of this study, is a highly appropriate behaviour in Estonian funerals but one of the most inappropriate behaviours in Greek funerals.

Discussion of Study 1

In Study 1, the SCM that was developed to assess cross-cultural differences in tightness–looseness operationalised as a "situational constraint" was used. Taking the mean score of all 225 questions of the SCM, the Estonian participants believed that the given 15 different everyday behaviours were more appropriate in the 15 specific situations. This supports our first hypothesis and suggests that Estonia is indeed a looser society than Greece, as we predicted on the basis of sociodemographic, cultural and ecological indicators, as well on the results of Gelfand et al.'s (2011) study.

Thereafter, comparative analyses were performed separately for particular situations by summarising the

appropriateness ratings of all behaviours for each situation. Similarly to the classic study by Price and Bouffard (1974), we found that the 15 situations varied greatly in their situational or behavioural constraint. Also, as predicted, the extremes on the "tight–loose" scale were the same for the respondents of both samples, providing support for our second hypothesis. As in Price and Bouffard's (1974) study on a small sample of North-American undergraduate students, *job interview* and *funeral ceremony* were considered the tightest or strongest situations having a more limited number of behaviours acceptable and appropriate and *one's bedroom* and *public park* as the loosest or weakest situations with less behavioural constraints among both Estonian and Greek samples. *Job interview* appeared to be the tightest situation, as could be expected for numerous reasons. Besides being formal, it is also a situation in which the result is personally important and depends on the impression one makes. *Funeral ceremony* is also a special event with strictly prescribed rules of conduct. It also carries core cultural values, established via long traditions demanding certain procedures and rituals (Metcalf & Huntington, 1991; Reimers, 1999). In comparison, being in *one's room* or in a *public park* clearly involves more behavioural freedom and less intrinsic rules.

Several interesting differences emerged. Although the behavioural constraints were stronger in most situations among the Greek sample, the amount of constraint was the largest in situations such as *library*, *workplace*, *classroom/lecture hall*, *funeral ceremony* and *job interview*, hence supporting our third hypothesis. These situations were also among the six "tightest" situations in the Greek sample. At least partly, these findings could be explained in light of previous studies that have shown that Greece scores higher than Estonia both on the cultural dimensions of power distance and uncertainty avoidance (Hofstede, 2001). Power distance refers to the extent to which power is distributed equally in societies. Large power distance cultures, such as Greece, are more hierarchical and, therefore, in organisational and school settings relatively strict rules apply leaving less space for behavioural freedom. Also, one could extrapolate that people in high uncertainty avoidance cultures look for order and structure in their organisations and institutions, and, therefore, they also regard such situations as requiring more constraints on behaviour. Therefore, control and power result in higher tightness in situations where, in Hofstede's words (1991), a "highly formalised conception of management" and "task orientation" prevail. Interestingly, there were no cultural differences in the situational constraint of being in *a doctor's office*, which could be explained by the contention that a doctor–patient consultation has a very strict sequence of different behavioural acts that simply cannot be carried out in a different order (Argyle, 1981).

What is the appropriate or inappropriate behaviour, then, in those four situations in which situational constraint differed the most for Estonian and Greek respondents? In other words, how should one behave at Greek school or in an Estonian organisation? As observed in Figure 1, *cursing/swearing*, *sleeping* and *burping/belching* appear to be the least appropriate behaviours in the *classroom/lecture hall*, *library* and *workplace*, similarly in Estonia and Greece. There is less agreement, however, between the samples in what is seen as the most appropriate behaviour in the two cultures. The biggest differences between the two samples in the three abovementioned situations occurred for behaviours such as to *argue*, to *read a newspaper*, to *blow one's nose* and to *talk*, in that they are seen as considerably more appropriate by the Estonian respondents than the Greek ones. It is well known that people in some cultures—especially in Japan, China, but also in France—find it disgusting to blow one's nose in public (McCrum, 2007). Apparently this is the case also in Greece, but not in Estonia. What is more interesting, however, is that, in the three abovementioned situations, *arguing* and *talking* are seen as less appropriate behaviours by the Greek than the Estonian respondents. Once again, this can be nicely explained by Hofstede's (2001) finding, according to which Greece is high and Estonia low in power distance. In high power distance countries such as Greece, for instance, subordinates do not argue with their bosses, they expect to be told what to do, not to be consulted. Also, students do not argue with their teachers or express disagreement in high power distance societies and they are not supposed to make uninvited interventions in class or ask questions: it is teachers who initiate all communication (Hofstede, 2001). In low power distance countries such as Estonia, on the other hand, to *argue* and to *talk* are considered as one of the most appropriate behaviours in the *classroom/lecture hall* setting.

The mean appropriateness score of the 15 behaviours for Greek and Estonian respondents also differed largely for the situation *funeral ceremony*. A closer look at the findings revealed strong similarities between the two cultural groups in terms of the most (e.g. to *cry*) and the least (e.g. to *laugh out loud*, to *curse/swear*) appropriate behaviours at funeral ceremonies. The most significant cultural difference between Estonia and Greece was in the behavioural act of *singing*, which was considered a highly appropriate behaviour in Estonian funeral ceremonies and one of the most inappropriate behaviours in Greek funerals. This finding reflects well the difference in funeral customs in Estonia and Greece. In Estonia, singing of ecclesiastical or secular funeral songs at a funeral (both in the church as well as at the graveside) is an old custom that is still very much alive today (Mikkor, 2001). In Greece, however, the tradition of singing laments at funerals has gradually vanished over the last 30–40 years (Danworth, 1982).

STUDY 2

Method and procedure

Study 2 aimed at examining situational constraints in everyday social interactions across a wide range of different contexts in Estonia and Greece. A further aim was to study the correspondence between self-reported attitudes and actual behaviour with respect to the situational constraint aspect of tightness–looseness. For that purpose, an observational study was carried out in the capital cities of Estonia and Greece: Tallinn and Athens, respectively.

First, several situations from the SCM were selected, including those which were public and easily observable (e.g. city sidewalk) and excluding more personal and inaccessible ones (e.g. job interview). In addition, several situations were chosen from the list of 35 situations initially chosen for Gelfand et al.'s (2011) study. A final list included, and a series of structured observations was conducted in, the following situations: *bank*, *bus*, *funeral ceremony*, *public park*, *city sidewalk*, *restaurant*, *supermarket* and *waiting room* at the *bus station*. The list of observable everyday behaviours was also formed on the basis of the initial list of 34 everyday behaviours in pilots prior to Gelfand et al.'s (2011) study, and was supplemented with other behaviours that appeared during the observation procedure in both countries. Using a continuous real-time measurement method of systematic observation (Judd, Smith, & Kidder, 1991), behaviours that appeared in these situations were recorded during a 20-minute time-interval. In every situation, two observational sessions were conducted at different times, and each time the behaviours were recorded by two observers, independently from each other. As a result, a 2 observations × 2 observers matrix for each situation was obtained. Observations were carried out in the centre of Tallinn and Athens in the spring and summer of 2001.

All observers (1 male and 5 females) were psychology students from the University of Tartu in Estonia and the University of Athens in Greece. The observers were given detailed instructions by the second author of this study.[4] Each of them received an observation sheet with a list of behaviours and their task was to record the frequency of specific behaviours in every given situation, as explained above.

Interobserver reliability and congruence between the first and the second observation

Before conducting any analyses, the extent to which the results of the two independent observers agreed with each other was examined. For that purpose, correlations between the frequency of the behaviours reported by the first observer and the second observer were calculated, separately for the first and for the second observation, for each of the eighth situations. The results were as follows: in the case of the Estonian data, correlations ranged from .94 to .99, with the mean $r = .97$. In the case of the Greek data, correlations between the reports of the two observers were somewhat lower, ranging between .72 and .99, with the mean $r = .91$. As the correlations between the reports of the two observers were sufficiently high, it was decided to use the frequencies of the behaviours averaged across the two observers in the subsequent analyses.

Before proceeding with cultural comparisons, it was necessary to study the extent to which the results of the first and second observations coincided. The correlations between the mean frequencies of the behaviours from the first and the second observations were therefore calculated. For the Estonian data, the Pearson correlation coefficients ranged from .71 (*waiting room*) to .93 (*sidewalk* and *supermarket*), with a mean correlation of .85 across the eight situations. For the Greek data, the correlations were between .72 (*park*) and .97 (*bus*), with a mean correlation of .83 across seven situations (there was only one observation at the funeral ceremony in Greece). As the congruencies between the two observations were also relatively high, the mean frequencies of behaviours, averaged both across the observers and the observations, were used in the subsequent analyses.

Results

First, it was examined whether the observed frequency of behavioural acts in the given set of eight situations differed between Greece and Estonia. For that purpose, chi-square statistics were calculated separately for all eight situations. Quite surprisingly, the results indicated that the Greek and Estonian data differed significantly only in two situations—*funeral ceremony* and *city sidewalk*, χ^2 (14) = 46.42 ($p = .001$) and χ^2 (24) = 48.18 ($p = .002$), respectively. On a city sidewalk, Greeks appeared to *eat*, to *read the newspaper* and to *smoke* more than Estonians, whereas Estonians *laughed out loud* and *talked* more than Greeks. During the observed funeral ceremonies, once again Estonians were more frequently *talking* to each other, whereas Greeks were engaged in emotional behaviour (*crying* and *blowing nose*).

Finally, the most interesting issue was explored: to what extent are the results of the attitudinal survey of tightness–looseness (Study 1) in concordance with the results of the observational study (Study 2)? For this

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[4] Observations in Greece took place in spring semester 2001 when the second author was a free-mover student of the Erasmus program at the University of Athens.

TABLE 2
Correlations between the mean scores of the appropriateness of 14 behaviours (Study 1) and the mean frequencies of the behavioural acts (Study 2) across six situations for Estonia and Greece

	Estonia	*Greece*
Bank	.70**	.63*
Bus	.49	.50
City sidewalk	.46	.54*
Funeral ceremony	.61*	.86***
Public park	.38	.47
Restaurant	.59*	.67***

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

purpose, correlations between the results of the SCM and the results of the observations in this study were compared.

There were six situations (i.e. bank, bus, city sidewalk, funeral ceremony, public park and restaurant) and 14 behaviours (all except for to *flirt*) that were the same in the SCM and in the observations. Therefore, we calculated the correlations between the mean scores of the appropriateness of those 14 behaviours and the mean frequencies of the respective behaviours observed in the set of six situations. The correlations (calculated separately for Greece and Estonia) are shown in Table 2.

Correlations between the appropriateness of behaviours and mean frequencies of behaviours across situations were highest in *bank*, *funeral ceremony* and *restaurant*, showing that people in the cities where the observations were conducted tend to behave in the way respondents of Study 1 indicated in their attitudes. Correlations between the attitudes and actual behaviour for *public park* and *bus* were not statistically significant but were still quite high. Results of the SCM and observations in the *sidewalk* situation were significantly correlated for Greece, but not for Estonia.

Discussion of Study 2

As the first step of the analysis, the interobserver reliability and the congruence between the observations were analysed. With encouraging results—a very high interobserver reliability and a relatively high congruence between the two observations—it was possible to use the mean frequencies of behaviours averaged both across the observers and the observations in the subsequent analyses. Greek and Estonian behaviour differed significantly only in *city sidewalk* and *funeral ceremony*. Greeks appeared to *eat*, *read the newspaper* and *smoke* more than Estonians on the *city sidewalk*. It can be said that it is a situation in Greece where much activity takes place. Probably, also the warmer climate plays a role here. Both on the *city sidewalk* and during the *funeral ceremony*, Estonians were seen *talking* more frequently compared to Greeks. This

result is quite surprising, contrasting with the stereotype of Greeks as lively and temperamental in character, but it is in concordance with the results of Study 1, where Greek respondents regarded *talking* as less appropriate across a number of situations. Greeks showed more emotional behaviour (*crying* and *blowing nose*) in the funeral ceremony compared to Estonians. As has been noted, members of high uncertainty avoidance cultures (such as Greece) tend to display emotions more than do members of low uncertainty avoidance cultures (such as Estonia; Hofstede, 1991). Yet in Study 1, no differences in the mean appropriateness score of *crying* between the two samples emerged, whereas to *blow one's nose* in a funeral ceremony was seen considerably more appropriate by the Estonian respondents than the Greek ones. When interpreting the results of the observational study, of course, one should remember that only two observation sessions were conducted in each situation.

The concordance between the self-reported attitudes and actual behaviour was analysed to see if judgements of the appropriateness of the behaviours by the members of the cultures also reverberate in the actual behaviour of the people in those countries. Across the six situations, *bank*, *funeral ceremony* and *restaurant* showed high correlations between attitudes and the actual behaviour, whereas correlations were not significant but still quite high for *bus* and *public park*. It should be kept in mind, however, that there were very few observations, which could be the reason why some of the correlations were not significant. Given the pattern of results, it appears that perceived situational constraint (Study 1) and actual situational constraint (Study 2) are indeed related.

GENERAL DISCUSSION AND CONCLUSIONS

Cultures can best be conceptualised as "constantly changing, open systems of attitudes, norms, behaviours, artifacts, and institutions that people reinforce but also continually modify or even challenge through diverse means of participation and engagement" (Kim & Markus, 1999, p. 789). As Hermans and Kempen (1998) have emphasised, the influence of the globalisation process, involving increasing cultural connections and the impact of global systems and accelerating cultural complexity challenge the mainstream conceptions of cultural dichotomies. In spite of culturally incongruent behaviours and attitudes, core ideas and themes that consistently connect different parts of the given cultural context and that are shared by the majority of participants in a culture still exist. Cultural dimensions or attributes can be regarded as these cultural core ideas. Tightness–looseness is one of those cultural dimensions. It is a matter of future debate whether tightness–looseness is a more relevant characteristic of cultures than the largely studied individualism–collectivism dimension (Chan et al.,

1996; Minkov et al., 2012), for instance, but nevertheless it appears to have produced a meaningful ranking of cultures that is not redundant to other, previously studied basic cultural dimensions (see Gelfand et al., 2011).

The present studies examined how the cultural dimension of tightness–looseness is manifested in everyday situations in Estonia and Greece. The results of the studies showed that differences could be found in particular situations and behaviours both within and across cultures. The findings of the questionnaire study (Study 1) seem to imply that, similarly to other cultural dimensions such as individualism–collectivism, for instance, tightness–looseness could be indeed conceptualised as both a culture general as well as a context- or domain-specific construct (see Realo, Koido, Ceulemans, & Allik, 2002, for a review on individualism). On the one hand, both in Estonia and Greece, *job interview* and *funeral ceremony* were considered the tightest (strongest) situations, having a limited number of acceptable behaviours, whereas *one's bedroom* and the *public park* were the loosest (weakest) situations, with less behavioural constraints. This confirms earlier findings by Price and Bouffard (1974) and is substantially in line with Triandis (1996) claim that there are certain domains within all cultures which are tight and other domains which are loose. On the other hand, our results showed that situational constraints are especially strong in Greece, compared to Estonia, in school and organisational settings, such as *classroom/lecture hall*, *job interview* and *workplace*, where people have hierarchically structured roles and relationships. These findings suggest that the strength of situations may also substantially vary across cultures, along with other important cultural dimensions, such as power distance or uncertainty avoidance, for instance (Hofstede, 2001).

Most studies that use self-report measures cannot actually claim that they study behaviour. In this study, an encouraging result was obtained in Study 2, which revealed a relatively high agreement between the appropriateness of certain behaviours judged by the respondents in Study 1 and the actual frequencies of observed behavioural acts, with respect to the situational constraints of tightness–looseness.

In summary, our findings suggest that the strength of situations may substantially vary both within and across cultures and that the attitudes of the members of the particular culture are in concordance with how people in general behave in their culture. We are fully aware of the limitations of the study (including the small number of observed situations) and, therefore, more observational studies involving a wider range of cultures and situations are needed to support the findings of our research and the theoretical framework of tightness–looseness in general.

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