

## Independent and Interdependent Self-construals and Socio-cultural Factors in 29 Nations

*Titre français*

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### Abstract

5688 students from 29 nations answered a shortened version of the Singelis scales for Independent-Interdependent self-construal. A pan-cultural factor analysis found four factors: Group Loyalty, Relational Interdependence, Uniqueness, and low Contextual Self. Multisample Confirmatory Factor Analysis indicated a cross-culturally stable, and comparable, six item scale for Interdependence. Interdependence was related to low English fluency and high national identification, low social status and higher social sharing of positive feelings. Independence was associated with high English fluency and high social status. A multivariate analysis controlling for national income, national identification, English fluency, students' relative social status, parent's educational level

### Résumé

5688 étudiants de 29 nations ont répondu à une version courte de l'échelle de Singelis sur le concept de soi indépendant – interdépendant. Une analyse factorielle transculturelle nous a permis de mettre en évidence quatre facteurs du concept de soi : loyauté groupale, interdépendance relationnelle, unicité et « bas contexte ». Une analyse factorielle confirmatoire multi-échantillons a confirmé la stabilité transculturelle de ces résultats ainsi qu'une structure comparable de six items de l'échelle pour l'interdépendance.

L'interdépendance est en relation avec une moindre connaissance de la langue anglaise, une forte identification nationale, un bas statut social et un plus grand partage social des sentiments positifs. L'indépendance est associée à la

### Mots-clés

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Individualism,  
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Hierarchy, Cultural  
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### Key-words

Representations ou  
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Individualisme,  
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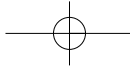
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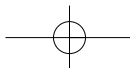
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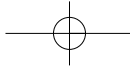


and other cultural dimensions, showed that individualism (Hofstede's nation score) was associated with high Uniqueness and low Group Loyalty. Low Contextual Self and Relational Interdependence were unrelated to individualism. Uniqueness and low Group Loyalty were more typical of «masculine» and hierarchical cultures. Relational Interdependence was linked to «feminine» cultures and partially to individualism.

connaissance de l'anglais et à un statut social élevé. Une analyse multivariable, contrôlant les revenus nationaux, l'identification nationale, la connaissance de l'anglais, le statut social familial des étudiants, le niveau d'éducation des parents et d'autres dimensions culturelles, montre que l'individualisme (les scores nationaux de Hofstede) est associé à une Unicité élevée et à une moindre loyauté groupale. L'auto-concept de «bas contexte» et l'interdépendance relationnelle ne sont pas liés à l'individualisme. L'unicité et la basse loyauté groupale sont plus typiques dans les cultures masculines et hiérarchiques. L'interdépendance relationnelle est associée aux cultures féminines et partiellement à l'individualisme.

This study aims to test empirically relations between self-concept and beliefs related to the social context and cultural values. The use of value, attitudes and belief scales has been criticized due to the fact that they refer only to declarative and abstract verbal knowledge (Matsumoto, 2002; Fiske, 2002). Nevertheless, studies conducted on the topic of values have shown convergent results (Markus, Kitayama, Fiske & Nisbett, 1998; Hofstede, 2001; Smith & Schwartz, 1997). Empirical analyses of large scale value surveys suggest that the so called individualistic societies emphasize achieving status and contractual, negotiated social relations, based on trust and social interactions with strangers (Hofstede, 2001; Smith, Dugan & Trompenaars, 1996; Schwartz 1994). Personal responsibility, egalitarianism and freedom are also emphasized. Collectivist societies emphasize ascribed status, loyalty to ascribed groups and duties and obligations towards in-groups – family, clan, ethnic, religious or other groups. Personal relationships, inequalities, respect and self-discipline and mistrust towards out-group members are also



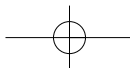


important in so called collectivist societies (Smith & Schwartz, 1997; Smith, Dugan & Trompenaars, 1996; Hofstede, 2001).

Some of the most important collectivist attributes included by social psychologists in belief and attitude scales have been (in consensus order): a) a sense of duty to in-group (i.e. I will stay in a group if it needs me, even when I am not happy with the group; It is important for me to respect decisions taken by the group); b) relatedness to others (i.e. I often have the feeling that my relationships with others are more important than my own accomplishments); seeking others advice, and sense of belonging; c) harmony and working in groups (i.e. It is important for me to maintain harmony within my group; I respect people who are modest about themselves), d) a contextualised self and e) valuing hierarchy (Singelis *et al.*, 1995; Oyserman, Coon & Kimmelmeier, 2002).

Individualistic attributes included by social psychologists in belief and attitude scales have been (in consensus order): a) independence; b) personal achievement (i.e. I am comfortable with being singled out for praise); c) self-knowledge (i.e. My personal identity, different from others, is very important for me and I act in the same way no matter who I am with); d) uniqueness (i.e. I enjoy being unique and different); e) privacy; f) direct communication (i.e. I would rather say "no" directly than risk being misunderstood, and I prefer to be direct and forthright when dealing with people I have just met), and g) competition (Singelis *et al.*, 1995; Oyserman, Coon & Kimmelmeier, 2002).

With regard to validation of the Singelis scales, there has been a tendency towards comparing Euro and Asian Americans, and North Americans and Asians. Usually Euro-Americans score higher on Independence and lower on Interdependence than Asian-Americans (Singelis *et al.*, 1995; Singelis, 1994). Similar results were found in studies comparing Euro-Americans and Hong Kong Chinese (Singelis *et al.*, 1999; Lee, Aaker & Gardner, 2000). Kurman (2001) confirmed that respondents from Singapore scored lower in independence than (supposedly) individualistic Jews and collectivist Israeli druzes -the latter scored higher than the other two groups on Interdependence. Three studies have shown that in a similar fashion to druze Israelis, African Americans scored higher than Euro-Americans in

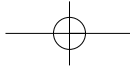


Independence and Interdependence, while no difference was found between the latter and Latino Americans in Independence – Latinos scored slightly higher in Interdependence. Asian Americans scored lower in interdependence than Euro-Americans (Coon & Kemmelmeier, 2001). Japanese scored lower in Interdependence and no differences were found for Independence in two studies comparing Canadian and US respondents with Japanese (Matsumoto *et al.*, 2001; Sato & Cameron, 1999). Finally, Filipinos scored higher than North Americans and Japanese both in Interdependence and Independence (Uchida *et al.* 2001, quoted in Kitayama, 2002).

As we can see, there is mixed evidence for the validity of Singelis' scales, and results suggest problems with their content validity and the actual core attributes of individualism and collectivism.

### Evidence relating collectivist and individualist beliefs and attitudes to self-construal

Oyserman *et al's* (2002) meta-analysis confirmed that individualist North Americans score lower than other samples on scales emphasizing a sense of duty towards the in-group. However, when scales include items related to sense of belonging and seeking other people's advice, North Americans report higher scores. Cross, Bacon & Morris (2000) differentiate a collectivist group-oriented Interdependence (i.e. a sense of duty and in-group loyalty) from a relationship-oriented Interdependence (i.e. voluntary interpersonal relatedness) and validate a measure of Relational Interdependence associated with self-disclosure. Gabriel and Gardner (1999) found that women focused more on the relational aspects of Interdependence, whilst men emphasized more the collective aspects (i.e. group membership) of interdependence more. Kashima, Yamaguchi, Kim, Choi, Gelfand & Yuki (1995) found that females from individualistic nations (USA, Australia) scored higher on a relatedness self-construal dimension. Japanese males scored lower on this dimension. In the same vein, McClelland's (1961) scores on need for affiliation are associated with cultural indices of individualism. As Hofstede (2001) argues, in contractual and individualistic societies social relationships are less ascribed or socially predetermined and peo-

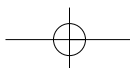


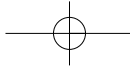
ple have a stronger need to acquire friends. In sum, individualists are more socially attuned and relationally skilled than collectivists (Hofstede, 2001) and are more likely to include interpersonal relationships in their self-construal (Cross, Bacon & Morris, 2000). Waterman (1981) argues that Interdependence and individualism are associated, because individualistic values reinforce generalized trust and voluntary coordination towards compatible and coordinated goals, factors which facilitate pro-social and cooperative behavior.

Oyserman *et al.*'s (2002) meta-analysis also confirmed that individualist North Americans score higher than other samples on a scale emphasizing personal independence and uniqueness. US respondents scored higher in public self-consciousness than Japanese and Korean respondents, confirming a relationship between individualism and presenting oneself in public as individual (Hofstede, 2001).

With regard to competition and personal achievement, Oyserman *et al.* (2002) remark that when competition items were included in the studies, the difference between North Americans and Japanese disappeared, suggesting that competitiveness is unrelated to cultural individualism – as Mead concluded in an ethnographic review (Fiske, 2002). However, a competitiveness scale was related to collectivism in a 42 nation study (Van de Vliert, 1998), and Triandis (1995) posited that competition is related to vertical individualism and not to horizontal individualism (Oyserman, Coon & Kimmelmeier, 2002). Hofstede (2001) also emphasized that cooperation is unrelated to collectivism.

In relation to the emphasis on internal attributes and a less contextualised self, studies do not confirm that individualistic cultures reinforce low self-monitoring or that collectivist ones reinforce the contextualised self (e.g. How I behave depends on who I am with, where I am – Gudykunst, Yang & Nishida, 1987; Goodwin, 1999). In fact, Anglo-Saxon respondents scored higher on self-monitoring than Asian respondents. Collectivist persons rely on norms and roles when deciding how to behave and not on what they perceive that other people think and feel, and this explains why they are low in self-monitoring (Gudykunst *et al.*, 1987).

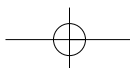




Hofstede (1998) posited that cooperation and nurturance are not typical of collectivism, but of so called feminine societies, and that competition and assertiveness are typical of masculine cultures. Scandinavian individualistic and feminine cultures emphasize personal autonomy and are also extremely non-competitive, stressing modesty (Hofstede, 1998; Fiske, 2002). Due to the fact that people in so called feminine cultures value warm relationships, belongingness and relatedness may be more salient in self-construal there than in competitive cultures. Hofstede's Cultural Masculinity scores correlates strongly with Schwartz's Mastery values (independent, successful, daring, ambitious, choosing one's own goals). Competitiveness as measured by a Spence-Helmreich scale showed a moderate correlation with cultural masculinity and was strongly related to Power Distance (Van de Vliert, 1998).

Hofstede's power distance dimension deals with the amount of deference and respect between superiors and subordinates and the extent to which people accept status differences. In high power distance cultures, high status people exert their authority and status distinctions are more accepted as expected and legitimate. In low power distance societies, status distinctions are minimized and relations are more egalitarian. Hofstede posits that people in low power distance scenarios are more interdependent (i.e. equality is seen as the basis of society, so that consultative and decentralized group dynamics reinforce the sense of belonging). In high power distance cultures a few could be independent and most should be dependent on high status subjects. Because individuals rely on status and hierarchical rules there is a lower need for interdependence.

The power distance dimension is related to the sharing of power in society in general, including differential rewards between high and low status people. An asymmetrical society should reinforce competitiveness in order that one can rise up the social pyramid (Hofstede, 1998; 2001). Various studies suggest that competitiveness, internality, protestant work ethic beliefs (PWE), and work centrality are higher in less developed, collectivist and high power distance cultures in which materialistic values are still important (Smith, Dugan & Trompenaars, 1998; Van de Vliert, 1998; Inglehart, Basañez & Moreno, 1998; Furnham *et al.*, 1993).



Higher competitiveness, internal locus of control and agreement with PWE beliefs are found in both student and manager samples in developing, collectivist and high power distance countries. This suggests that these results characterize only elitist groups in poor, developing and collectivist countries. In fact, perception of life control as measured in Inglehart's World Value Surveys was related to high social development – as could be expected from studies linking higher social status and internal control (Sastry & Ross, 1998). However, using nationally representative samples, the emphasis on hard work as a quality that children should be encouraged to learn at home (World Values Survey, 1994; Inglehart, Basañez & Moreno, 1998) was shown to be related to collectivism and high power distance (Hofstede, 2001). In post-industrial societies, individualistic and low power distance cultures, post-materialistic values related to self-actualization and quality of life are more important than work and material success. For instance, work is more central in cultures high on hierarchy and mastery (Schwartz, date), and probably also masculinity and power distance, as Hofstede's scores on masculinity and power distance are strongly related to mastery and hierarchy respectively.

To summarise, a core aspect of collectivism is a sense of duty and obligation towards the group. To a lower extent in-group harmony and working in groups are also typical features. A sense of belonging, relatedness and cooperation are unrelated or negatively related to collectivism and are probably more characteristic of "feminine" or cooperative and egalitarian cultures. Core aspects of individualism are personal independence and uniqueness. Competition, personal achievement, emphasis on internal attributes in opposition to other people's opinions and cues are unrelated to or negatively related to individualism. Personal achievement and competition are more valued in developing nations, "masculine" or competitive and hierarchical cultures, than in post-materialist, developed, egalitarian, cooperative or "feminine" and contractual societies. In the former societies, relative scarcity of resources and a strong struggle for social survival and acceptance of inequalities impose strong in-group solidarity, generalized competitiveness and an emphasis on personal effort and rewards. In the latter, material stability, lack of ascribed group

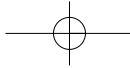
membership and expressive individualism reinforce the importance of social relationships.

Previous studies of these issues share a series of misconceptions and limitations. Most of the data compares North Americans with Asian collectivists and does not compare differences within America or within Europe. Cross-cultural reliability and structural validity are checked by means of confirmatory factor analysis only within a minority of studies. Reliabilities tend to be low and only some studies try to improve reliabilities and cross-cultural comparability by means of item selection.

This study will contrast the convergent validity and reliability of a short form of the Singelis self-construal scale, using large student samples from the Americas, Europe (including Russia), Asia (Taiwan, China and Singapore) and to a lesser extent the Middle East (Turkey and Lebanon) and Africa (Nigeria and Ghana). Pan-cultural factor analysis and confirmatory factor analysis will contrast the structural comparability of scales. Within-subject standardized scores will be used in order to control for response set tendencies.

Finally, self-concept and attitudes scores will be correlated with English fluency, national identification and a scale of verbal expression and social sharing of positive emotions. High English fluency and low national identification, as indexes of contact with foreign cultures and cosmopolitanism, should be negatively related to interdependent or collectivist self-construal and positively to independent or individualist self-construal. Social sharing of emotions is common (Rimé *et al.* 1999) and sharing of happiness scenarios has been found related to collectivism, low power distance and cultural femininity in other studies (Fernandez *et al.*, 2000). An interdependent self-concept, because of the importance of social relations, should be associated to social sharing of happiness. Latin American and African collectivism values "sympathy" that implies an emphasis on positive interaction and particularly the verbalization of happiness. An independent self-concept, because of the importance of autonomy and competition, probably should be negatively related to the social sharing of happiness.





## Method

### ***Procedure and Participants***

All participants were volunteers from psychology and social science courses in universities in the Americas, Europe, Russia (Moscow and Tula), China (Beijing), Iran, Turkey, Lebanon, Nigeria and Ghana (see Table 2 and annex for the 29 nations studied). The sample consisted of 5,688 subjects (2,459 male and 3,229 female) with a mean age of 21.78 years ( $SD = 4.25$ ). Table 2 gives details of the samples, percentage of females, and reliability for Independent and Interdependent self-construals.

### ***Materials***

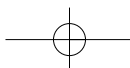
Three questionnaires were used in the present study. We used versions in English, Spanish, German, Portuguese, French, Italian, Russian, Turkish, Greek, Chinese and Farsi (see Annex). In designing these versions, the authors followed the guidelines proposed in the literature on cross – cultural methodology (Brislin, 1986): independent, blind, back translation and review by representative focus groups. The objective of the translation process was to preserve the conceptual meaning of the original form.

The first questionnaire asked for background information, including fluency in English, parent's education, age, and identification with one's nation. The second questionnaire contained the Singelis scales discussed below. A third questionnaire asked for typical expressive reactions of positive mood.

### ***Measures***

#### *Nation-level scores*

*Cultural dimensions.* Hofstede (2001) reports Individualism-Collectivism (IDV), Cultural Masculinity (MAS) and Power Distance (PDI) scores for 74 nations and regions. These ratings are mostly based on questionnaires answered by IBM employees throughout the world in the 1970s. In spite of the fact that the survey was conducted nearly 30 years ago, Hofstede's scores show high convergent validity with current surveys of values and with recent cross-cultural studies (Schwartz, 1994; Smith & Bond,



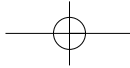
1998). Schwartz (1994) reports Intellectual and Affective Autonomy (IDV), Hierarchy (PDI) and Mastery (MAS) scores for 38 nations and regions. Inglehart (1997) reports Post-materialism scores for 43 nations and Hofstede provides Inglehart's scores for the Traditional-Secular dimension in 27 countries. Smith, Dugan & Trompenaars (1996) report means for 43 nations on two dimensions found with an MDS of values and scripts based on 11,000 employees. Higher scores on the first dimension (Egalitarian Commitment) implies a preference for universalistic relations and status based on achievement. Low scores emphasize preferences for personal and particularistic relations and ascribed status. The second dimension (loyal versus utilitarian involvement) opposes preferences for family loyalty and collective responsibility to an emphasis on personal responsibility and negotiated social relations. Hofstede's scores and Schwartz's rating of culture-level value types show strong concurrent validity: IDV correlated with affective and intellectual autonomy ( $r_{AA} (23) = .46$  and  $r_{IA} (23) = .53, p \leq .05$  respectively), low hierarchy ( $r_H (23) = -.51, p \leq .05$ ) and egalitarian commitment ( $r_{EC} (23) = .51, p \leq .05$ ). Hofstede's PDI scores correlated positively with conservatism and negatively with affective autonomy ( $r (23) = .45$ , and  $r = -.45, p \leq .05$ , respectively (Schwartz, 1994, p.109). IDV and FEM correlate with post-materialism and PDI with traditional authority (Hofstede, 2001). High scores mean high IDV, MAS, and PDI (see Table 1 for the contextual social and cultural scores for nations that are used in the present study).

*Socio-economic factors.* For each country we used both the Gross National Product (GNP), and the Human Development Index (HDI). The HDI measures national well-being and trends by combining three basic components of human development: longevity (mean life expectancy in the nation); knowledge (rate of literacy and school population); and standard of living (Gross National Product per person). HDI is the best known measure of development. It is more useful than purchasing power and per capita measures (Cordelier & Didiot, 1997). GNP in dollars and HDI scores for each nation were obtained from the United Nations Program for Development (UNPD) (Cordelier & Didiot, 1997; PNUD, 1999).

Country	IDV	PDI	MAS	GNP	SUP	HDI	Egal	Utili
Argentina	46	49	56	8030	36	.885	-.38	-.04
Belgium	75	65	54	24710	56	.929	.84	-.12
Bolivia	12	64	50	800	21	.584		
Brazil	38	69	49	3640	15	.796	.66	.22
Chile	23	63	28	4160	31.5	.882		
China	20	80	66	620	5.5	.609	-2.20	-.99
Colombia	13	67	64	1910	16.5	.840		
France	71	68	43	24990	56	.935	1.11	.09
Germany	67	35	66	27510	47	.920	1.38	-.54
Ghana	20	77	46	390	15	.467		
Greece	35	60	57	8210	36.5	.909	.31	.86
Guatemala	6	95	37	1340	8	.580		
Iran	41	58	43	2000	18.5	.754		
Italy	76	50	70	19020	47	.914	.39	.01
Lebanon	38	80	53	2660	27	.664		
Mexico	30	81	69	3320	16	.845	.68	.50
Nigeria	77	77	46	280	4	.400	-.08	.40
Panama	11	95	44	2750	32	.859		
Peru	16	64	42	2310	26	.694		
Portugal	27	63	31	11000	35	.878	.91	.18
Russia	39	93	36	2240	43	.804	-2.32	-1.31
Salvador	19	66	40	1610	18	.576		
Singapore	20	74	48	26730	34	.881	-.60	1.93
Spain	51	57	42	13580	56.5	.933	.03	.53
Switzerland	68	34	70	40630	32.5	.926		
Taiwan	17	58	45					
Turkey	37	66	45	2780	21	.711	-.03	.75
USA	91	40	62	26890	60	.940	1.96	-.15
Venezuela	12	81	73	3020	28	.859		

TABLE 1  
Nation-level predictors

Note. IDV=Individualism, PDI=Power-distance, MAS=Masculinity (Data= Hofstede, 1991, 2001), (Bolivia = estimated mean between Peru and Ecuador, Lebanon=Arab-countries, Ghana=West Africa); GNP=Gross National Product in dollars, SUP= Percentage of people with higher level studies, HDI=Human development index (Data=PNUD, 1999; Cordelier and Didiot, 1997); Egal= Egalitarian Commitment and Utili=Utilitarian Involvement (Data=Smith, Dugan & Troopenars, 1996). A high score for each variable denotes a high degree of the construct in question.;  $n = 29$ .



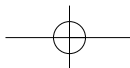
*Percentage of the Population receiving higher education.* As an indication of students' elite social position we used the percentage of the population receiving higher education. This figure is given in Table 1.

*Individual Level Measures:*

- 1.- *Identification with the nation* (ranging from 1 = none to 5 = very much)
- 2.- *Self-reports of English Fluency* (ranging from 0 = none to 6 = correctly)
- 3.- *Social status:* Parent's studies: 1 = Illiteracy; 2 = Primary; 3 = Secondary; Technical Higher Education; 4 = University.
- 4.- *Self-construal*

*Singelis Scale.* A shortened and modified version of the Singelis et al (1994) scale was used. All the original items related to vertical collectivism or «respect» were excluded in order to avoid content confounding between collectivism and power distance (original items 1,2,8, 20). The selection of items was performed by a group of 12 multicultural American and European social psychologists. A pilot study in Latin-America and southern Europe was used to exclude items related to health and well-being that were normative. A large majority of people answered affirmatively to original items 15, 18, 24 and 11. The seven remaining interdependent self-construal items and the six remaining independent items are shown in Table 3. Respondents answered using 4-point Likert scales: 1 = totally disagree; 4 = Totally agree. This was preferred to a longer scale because reducing scale points has been proposed in order to reduce response bias. Within-subject standardization was also used (Smith & Bond, 1998).

5.- *Social sharing of happiness scale:* Six scales asked how typical it is when feeling joy or happiness to share with others: a) Being friendly; b) Not falling out with other people; c) doing nice things for other people; sharing feelings so that other people may feel good; d) communicating good feelings to other people; e) saying positive things; f) talking a lot, being talkative. Respondents answered on 4-point Likert scales: 1 = not typical; 4 = very typical.



Nation	<i>N</i>	% Women	Alpha interdependent	Alpha independent	Mean interdependent	Mean independent
Argentina	225	59.6	.61	.31	3.06	2.84
Belgium	87	82.6	.61	.51	2.89	2.75
Bolivia	114	51.8	.46	.49	3.10	3.20
Brazil	500	52.6	.57	.39	3.15	2.96
Chile	138	57.7	.65	.64	2.95	2.99
China	119	49.3	.70	.34	2.88	2.87
Colombia	127	52.8	.75	.55	2.94	3.15
El Salvador	102	83.9	.64	.44	3.26	2.98
France	191	51.6	.54	.45	2.89	2.81
Germany	109	62.1	.52	.54	2.95	3.04
Ghana	28	44.8	.11	-.50	2.76	2.78
Greece	114	81.2	.69	.33	3.00	2.98
Guatemala	42	81.3	.53	.52	2.97	3.12
Iran	87	60.9	.65	.14	2.91	2.79
Italy	120	51.7	.73	.59	2.87	2.97
Mexico	169	50.9	.64	.60	2.72	3.28
Nigeria	37	25.1	.58	.63	3.10	3.20
Panama	80	75.1	.47	.37	2.95	3.20
Peru	120	50.0	.64	.50	3.04	3.07
Portugal	264	59.1	.68	.54	3.14	2.85
Russia	120	50.9	.65	.52	2.82	2.90
Singapore	119	48.7	.69	.59	3.09	2.80
Spain	1273	54.8	.67	.64	3.06	2.79
Switzerland	175	81.1	.68	.48	2.92	2.83
Taiwan	36	86.1	.70	.54	2.87	3.00
The Lebanon	118	49.2	.63	.60	3.05	3.12
Turkey	105	63.5	.64	.45	2.74	2.99
USA	120	42.6	.71	.54	2.96	2.96
Venezuela	226	58.1	.66	.49	2.94	2.98

TABLE 2:  
Percentage of females,  
means and Cronbach  
alpha reliabilities for  
interdependent and  
independent self-con-  
strual, for each nation.

Singelis: Interdependent self-construal (7 items) and Independent self-construal (6 items)  
Mean with effect on gender as a covariate.

TABLE 3:  
Pancultural factor analysis of Singelis' Self-  
Construals items

Item	Factors			
	1	2	3	4
<b>Group Loyalty</b>				
7. I would stay in a group if they needed me, even if I were not happy with the group.	.69			
4. I will sacrifice my self-interest for the benefit of the group I am in.	.64			
5. I often have the feeling that my relationships with others are more important than my own accomplishments.	.59			
6. It is important for me to respect decisions made by the group.	.57			
2. My happiness depends on the happiness of those around me.	.51			.36
<b>Uniqueness</b>				
11. I enjoy being unique and different from others in many respects.		.78		
9. I am comfortable with being singled out for praise or rewards.		.66		
12. My personal identity is independent of others, is very important for me.		.64		
<b>Low Context</b>				
10. I act the same way no matter who I am with.			.73	
13. I prefer to be direct and forthright when dealing with people I've just met.			.69	
8. I'd rather say "no" directly, than risk being misunderstood.			.45	
<b>Relational Interdependence</b>				
3. I respect people who are modest about themselves.				.77
1. It is important for me to maintain harmony within my group.	.37			.58
Eigen Value	2.36	1.76	1.13	1.01
% explained variance	18.13	13.58	8.72	7.77
Cronbach alpha reliabilities	.61	.51	.37	.39

## Results

### **Reliabilities and factor analysis of the Singelis items: Individual level.**

Means, Alpha coefficients and proportion of women for each nation are shown in Table 2. Reliabilities were low, particularly in African and Asian samples (see Table 2). A pan-cultural factor analysis (Principal Components, Varimax rotation) was per-

formed both on raw scores and on the within-subject standardized scores. Both analyses showed similar results. Additional data analysis was performed with a random sample of 200 Spaniards and 200 Brazilian participants, equalizing also the percentage of males, in order to equalize the weight of nations and to control for gender inequality. Factor analyses were performed also by cultural areas (Latin-America, North-America, Germany, French

Nation	Groupe loyalty		Uniqueness		Low Context		Relational Interdependence	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Argentina	2.86	0.04	2.94	0.04	3.40	0.03	2.73	0.04
Belgium	2.51	0.06	3.04	0.07	3.33	0.05	2.46	0.07
Bolivia	2.91	0.06	3.22	0.06	3.45	0.05	3.18	0.06
Brazil	2.97	0.03	2.94	0.03	3.54	0.02	2.98	0.03
Chile	2.81	0.05	3.03	0.05	3.24	0.04	2.96	0.05
China	2.68	0.05	2.96	0.05	3.16	0.04	2.78	0.05
Colombia	2.77	0.05	3.32	0.06	3.27	0.04	2.99	0.06
El Salvador	3.25	0.05	2.96	0.06	3.54	0.05	3.00	0.06
France	2.42	0.04	2.97	0.05	3.43	0.04	2.65	0.05
Germany	2.73	0.06	3.08	0.06	3.21	0.05	3.00	0.06
Ghana	2.63	0.11	2.79	0.12	2.91	0.09	2.77	0.12
Greece	2.70	0.05	3.40	0.06	3.33	0.05	2.55	0.06
Guatemala	2.97	0.11	3.25	0.11	3.13	0.09	2.99	0.11
Iran	2.69	0.07	2.95	0.07	3.23	0.06	2.63	0.07
Italy	2.53	0.05	2.99	0.06	3.38	0.05	2.94	0.06
Lebanon	2.55	0.05	3.40	0.05	3.11	0.04	3.15	0.05
Mexico	2.97	0.10	3.26	0.10	3.42	0.08	3.14	0.10
Nigeria	2.78	0.06	3.30	0.07	3.47	0.06	3.09	0.07
Panama	2.80	0.05	3.09	0.06	3.47	0.05	3.05	0.06
Peru	2.83	0.04	2.87	0.04	3.55	0.03	2.84	0.04
Portugal	2.60	0.04	3.21	0.04	3.14	0.03	2.60	0.04
Russia	2.91	0.05	2.94	0.06	3.37	0.05	2.66	0.06
Singapore	2.86	0.02	2.90	0.02	3.36	0.01	2.69	0.02
Spain	2.41	0.04	3.13	0.05	3.45	0.04	2.54	0.05
Switzerland	2.55	0.10	3.04	0.10	3.20	0.08	2.95	0.10
Taiwan	2.74	0.05	3.22	0.06	3.48	0.05	3.02	0.06
Turkey	2.42	0.06	3.19	0.06	3.18	0.05	2.79	0.06
USA	2.91	0.06	3.15	0.06	3.12	0.05	2.77	0.06
Venezuela	2.78	0.04	3.04	0.04	3.34	0.03	2.92	0.04

TABLE 4:  
Means for pancultural factors by nation with gender as covariate.

speaking Europe, Southern Europe, Arab and Asian countries). The factor structure obtained was stable.

The first factor explained 15% of the variance and shows a clear meaning of group loyalty, clustering items related to sense of duty and obligation towards in-groups and relatedness. The second factor explains 12% of the variance, and independent items related to uniqueness and personal reward load in this dimension. The third factor explains 11% of the variance and was formed by independent items associated with direct communication and a "less contextualised self". Finally the fourth factor explains 10.5% of the variance and clusters interdependent items with a meaning of in-group harmony and relation. Only the first interdependent factor shows a moderately satisfactory reliability coefficient.

Multisample confirmatory analysis found a six item interdependence factor with satisfactory goodness of fit ( $CFI = .94$ ), and transcultural validity. This factor includes group oriented items of the first factor found by the exploratory pan-cultural analysis plus an item emphasizing in-group harmony: a) It is important for me to maintain harmony within my group, b) My happiness depend on the happiness of those around me, c) I will sacrifice my self-interest for the benefit of the group I am in, d) I often have the feeling that my relationships with others are more important than my own accomplishments, e) It is important for me to

TABLE 5:  
Intercorrelations of  
original and pancultural  
Self-Concepts  
measures

Measures	1	2	3	4	5	6
1. Original-Singelis-Interdependent						
2. Original-Singelis-Independent	.07*					
3. CFA-Interdependent	<b>.94*</b>	-.01				
4. Group Loyalty	<b>.86*</b>	-.02	<b>.92*</b>			
5. Uniqueness	-.09*	<b>.73*</b>	-.11*	-.11*		
6. Low Context	.08*	<b>.74*</b>	.08*	.07*	<b>.17*</b>	
7. Relational Interdependence	<b>.73*</b>	.04*	<b>.67*</b>	<b>.40*</b>	-.03	.08*

Note. Pearson product-moment coefficients. A high number on each variable denotes a high score on that same variable

Originals Self-Concepts: Interdependent (7 items) Independent (6 items)

CFA (Confirmatory Factor Analysis)-Interdependent (6 items)

Factors (exploratory factor analysis): 4 dimensions (1=Group Loyalty; 2= Uniqueness, 3=Low Contextual Communication; 4=Relational interdependence and group harmony)

$n = 5138-87$ , 29 countries.

\*  $p \leq .01$  (two-tailed).



respect decisions taken by the group, f) I will stay in a group if it needs me, even when I am not happy with the group (one interdependence item was dropped). With respect to independence multisample confirmatory analysis (CFA) was unable to define a factor with satisfactory goodness of fit and cross-cultural validity.

### **Concurrent validity of the Singelis sub-scales and factor scores: individual level**

To check for the construct validity of the Singelis items, correlations were computed between the scores of the two original Singelis scales and the four pan-cultural factors. Gender, parent's educational level as an index of social status, English fluency and national identification as an index of acculturation were also correlated with self-construal scores. Separate analyses were performed using raw scores and within-subjects standardized scores. Both analyses show similar results. It is important to recall that Group Loyalty and the Interdependent dimension found by CFA are the most stable factors.

Nation	Groupe loyalty		Uniqueness		Low Context		Relational Interdependence	
	<i>r</i>	$\beta$	<i>r</i>	$\beta$	<i>R</i>	$\beta$	<i>R</i>	$\beta$
GNP	.03	.02	.02	-.05	-.13*	-.09*	.10*	.15*
SUP	.12*	.06*	-.03	.04	-.15*	-.07*	.06	-.05*
IDV	.05	-.06*	.01	.07*	-.12*	-.04	.07*	.02
PDI	-.14*	-.14*	.13*	.17*	.05	-.04	-.04	.00
MAS	-.13*	-.11*	.10*	.11*	.08*	.09*	-.07	-.11*
SEX	-.03	-.04*	-.05	-.05*	.02	.03	.09*	.07*
STATUS	-.12*	-.08*	.15*	.12*	.03	.01	-.08	-.07*
ENGLISH	-.05	-.07*	.11*	.12*	-.03	.01	-.06*	-.07*
IDENTITY	.02	.03	-.07*	-.07*	.06*	.03	.05*	.07*
<i>R</i> ( <i>R</i> <sup>2</sup> )		.23(.054)		.27(.07)		.18(.03)		.21(.04)

TABLE 6:  
Predictors of factors derived from Singelis Self-Construals items (Multiple Regression Analysis-).

Note. Pearson product moment coefficients and standardized beta coefficients. A high number on each variable denotes a high score on the variable as named., Collective variables: GNP=Gross National Product, SUP= percentage of a nation's people with higher level studies, IDV= Individualism, PDI= Power distance, MAS=Masculinity; Individual variables: Sex (1=men,2=women), Status= parent's education level; English= English fluency, Identity= identification with the nation. Individual level analysis  $n = 4023-85$ , 29 nations. Method enter. *R* (*R*<sup>2</sup>) = Multiple R (Adjusted R square).

Pancultural Factors (exploratory factor analysis): 4 dimensions (1=Group Loyalty; 2= Uniqueness, 3=Low Contextual Communication; 4=Relational interdependence and group harmony)

\* $p \leq .01$  (two-tailed).

Table 5 shows that Group Loyalty and Relational Interdependence are correlated significantly. Group Loyalty also correlated negatively with Uniqueness. Uniqueness was positively related to the Low Context factor.

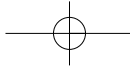
Gender (being female) was associated with the original Singelis interdependent scale,  $r = .04, p < .001$  (with raw scores), low context self,  $r = .04, p < .001$  (with raw scores), and with Relational Interdependence,  $r = .09, p < .001$  with raw scores and  $r = .10, p < .001$  with standardized scores).

Group Loyalty also correlated with low fluency in English and low family status. Relational Interdependence correlated with low family status, high national identification, and low English fluency. Finally, Uniqueness factor correlated with low national identity, high fluency in English and high family status.

Females show a relational and low contextual self profile while males share a Group Loyalty and Uniqueness profile. Finally, the original interdependent scale and the CFA interdependent scale correlate with social sharing of positive emotions, both  $r = .10, p < .001$  (with within subject standardized scores), Group Loyalty also correlates with verbal expression of joy, ( $r = .05, p < .001$  and  $r = .10, p < .001$  with standardized scores). The Low contextual self and Uniqueness correlate negatively with social sharing of happiness,  $r = -.06$ , and  $r = -.07$ , both  $p < .001$ .

### ***Regressions predicting Singelis factor scores at the individual level***

In order to control for possible interrelations or multicollinearity, multiple regressions were computed and standardized coefficients were used as indices of specific influence. To control for the relative status of students within each nation, the percentage of the population with a high education level was also included in the regression. Sex (dummy variable, Male = 0, Female = 1), English fluency, national identification, and family status (parent's educational level) were also included with the aim of controlling for individual factors. Singelis' factor scores were regressed on sex, Gross National Product per capita, percentage of population with higher education, and Hofstede's nation scores. Individual level variables were entered in a first step and then in a second



step the more distal cultural values scores were entered (see table 6).

Group Loyalty is predicted by cultural femininity, low power distance, low English fluency and high national identification, high national educational level, collectivism, low family status and male gender. Results were similar for the CFA Interdependent score.

Relational interdependence is predicted by cultural femininity, high income, lower acculturation, low family status and by being female. Results suggest that interdependence, particularly in-group loyalty, is more typical of traditional and low status respondents in developed, feminine, low power distance and collectivist societies.

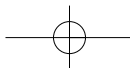
Uniqueness was predicted by high power distance, masculinity, individualism, by being male, lower identification with nation and higher English fluency.

Low contextual self was predicted by low income, and nation's low educational level. Results suggest that independence, particularly uniqueness, is more typical of less traditional and high status respondents in competitive, high power distance and individualistic cultures, and less developed societies in which university students belong to a social elite.

## Discussion

First of all, we should note that effect sizes tend to be small, as could be expected using large samples including large uncontrolled sources of variance (Scherer, 1997) and declarative decontextualized items, as the Oyserman *et al.* (2002) meta-analysis shows. However, in spite of using distal contextual socio-cultural factors, the results do offer a coherent profile.

The Singelis interdependence items cluster into two strongly related factors (Group loyalty and Relational interdependence) in the pan-cultural factor analysis. Confirmatory factor analysis shows that a cross-culturally stable and comparable six item interdependence scale could be used combining five items of the Group Loyalty factor and one Relational interdependence item, in-group harmony.



Singelis' Group Loyalty, Relational Interdependence and the CFA interdependence factor score were all associated with lower English fluency, confirming that low contact with other cultures is related to collectivist self-construal. Moreover, interdependent self-construal was related to national identification (see also in this number the Smith et al paper for similar results), suggesting that people with an interdependent self-concept, because of their emphasis on in-group loyalty, are more likely to identify with their nation. Simultaneously, interdependent self-construal was related to the social sharing of positive feelings, confirming that people with interdependent self-construals report communicating positive feelings more with others. Social sharing of emotions and sharing in happiness scenarios has been related to collectivism, low power distance and cultural femininity in other studies (Fernández *et al.*, 2000).

In the multivariate analysis, the Interdependence factor scores were partially associated not only with low English fluency and high national identification but also with cultural indices of collectivism. This in some way confirms that beliefs of loyalty and obligation to in-groups are a core attribute of collectivism. This is congruent with Oyserman, Coon and Kimmelmeier's (2002) meta-analysis which found that Euro-Americans scored lower in collectivism than African Americans and to a lesser extent than Asians, Europeans, Latin Americans and people from the Middle East. However, the interdependence scales, i.e. Group Loyalty and the cross-culturally stable and comparable six item interdependence scale all correlate similarly with low power distance, feminine cultures and high income. Moreover, the multivariate analysis shows that Singelis' Group Loyalty was specifically predicted by a feminine and low power distance or egalitarian cultural context. This multivariate analysis suggests that egalitarian and cooperative values are more important than collectivist values in order to explain the relative dominance of group loyalty beliefs. Low power distance and hierarchy cultures de-emphasize obedience, inequalities, respect, deference and dependence on superiors. Results confirm Hofstede's argument: In low power distance cultures most subjects should be interdependent, as reflected on the higher value placed on Group Loyalty. In high power distance cultures a few should be independent (as in our

university student samples) and most should be dependent (Hofstede, 2001). It is because developed countries are usually low in power distance or relatively egalitarian that social development is related to interdependence.

However, results suggest that cultural values are more important than socio-structural factors in order to explain interdependence. Independent of social development, feminine cultures stress relations with others and social support, and by this token reinforce loyalty towards groups and in-group harmony, while masculine cultures de-emphasize interdependence and reinforce independence. Results confirm Hofstede's assumptions on the importance of social relationships, modesty and harmony in cultural femininity (Hofstede, 2001).

The fact that Relational Interdependence factor show low reliability and than scores were higher in developed countries and related to individualism is congruent with Oyserman, Coon and Kimmelmeier's (2002) meta-analysis, which found that when studies assessed collectivism using items related to sense of belonging and social support, individualistic Euro-Americans scored as relatively collective. To be in groups and seeking social support is a way of stressing interdependence not incongruent with individualism and developed countries. Moreover, developed and post-materialist nations emphasize self-expression and quality of life, particularly satisfactory interpersonal relationships (Inglehart & Baker, 2000).

The independence items yielded two factors (Uniqueness and direct communication and Low Self-Context), which are positively correlated. The confirmatory factor analysis showed that it is difficult to extract a cross-culturally stable and comparable independence scale, but confirmed the higher stability of the interdependent construct.

Singelis' Uniqueness factor score was associated with high English fluency and low national identification, confirming that cosmopolitanism is related to individualistic self-construal.

Low Context Self was related to high national identification and negatively related to social development. Low Context Self scores correlated with low social development (low income and lower national level of education) and with collectivism. In spite of the fact that collectivist cultures stress indirect communication in

personal relationships, our results suggest that these cultures are less flexible in communication and behavior - at least in self-reports. Because collectivist people rely on norms and roles when deciding how to behave and probably pay less attention to other people's internal states we can explain why they have low scores in the self-monitoring style scale - as several studies have previously found. On the other hand, individualistic people should be more socially attuned and flexible in order to establish and maintain fluid social relationships with strangers. Other studies also suggest that sociability and concern for interpersonal relationships are higher in individualistic societies, where interdependence needs to be created and maintained voluntarily, than in collectivist societies, in which subjects have defined and long-term normative in-groups (Wheeler, Reiss & Bond, 1997). Triandis *et al.* (1988) when discussing the cross-cultural results for collectivism-individualism concluded that: "...people are...more sociable in individualistic countries than they are in collectivist because they have to work hard to get into and to remain in their in-groups". It is important to notice that these beliefs were shared by students of poor and hierarchical countries, where they are part of the elite - by comparison to more developed nations, in which a large proportion of the population enters higher education. On the other hand, cultures which share competitive and more egalitarian values were also specifically related to Low Context Self, controlling for other factors. In masculine cultures "toughness" is valued, while in low power distance cultures superiors and inferiors are perceived as interdependent, and subjects probably communicate in a more direct manner (Hofstede, 2001).

Uniqueness was related to cultural masculinity and high power distance - to competitive and hierarchical cultures. However uniqueness was also predicted by individualism.

Results also show that males are not more individualistic, with a more independent self-construal, and that females are not simply collectivist with a more interdependent self-concept (Kashima, Yamaguchi, Kim, Choi, Gelfand & Yuki, 1995). Males report higher Group Loyalty and at the same time more independence (i.e. Uniqueness). Females report slightly higher scores on Relational Interdependence. Results are congruent with previous

studies which show higher pro-social values and relationalism in females. A meta-analysis of gender differences in Schwartz values in 47 nations found that men endorse more often values related to power (social status, dominance over people and resources) while women agree more with values related to benevolence (preserving and enhancing the welfare of those to whom one is close) (Smith & Schwartz, 1997). Studies also support the idea that women focus more on the relational aspects of interdependence and men emphasize more the collective aspects (i.e. Group Loyalty of interdependence (Gabriel & Gardner, 1999).

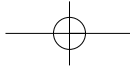
## Conclusions

Results partially support the idea that a sense of obligation and duty to the in-group is a core attribute of collectivist self-construal. As Oyserman et al have argued, relatedness to others, seeking other people's advice and sense of belonging to a group were also related to individualism and social development. Being voluntarily interdependent is congruent with individualistic values. This suggests that future research should take into account the important difference between vertical and horizontal individualism – the latter focusing more on social relationships. A large majority of individualistic cultures (western European countries) are simultaneously high in autonomy and in egalitarian commitment values (Schwartz & Ros, 1996).

Less interdependent and more independent self-construal is more typical of hierarchical cultures – and not of individualism. Interdependent and less independent self-construal is more highly stressed in egalitarian cultures – and not in collectivist cultures. Group Loyalty and low Uniqueness were related to low power distance

Even more important, interdependence was also related to cooperative cultural values and independence to competitive cultures. Group Loyalty, Relational interdependence and high Contextual Self were related to cultural femininity.

Our study in part confirms that Uniqueness is a core attribute of an individualist self-construal. Social development and higher parents' status were positively associated with Uniqueness. Independence, personal achievement, direct communication

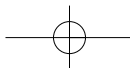


and competition are unrelated in this and other studies to individualism (Hofstede, 2001). Independence, Uniqueness and high scores in low contextual self were specifically associated with competitive cultures.

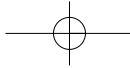
Nevertheless, the bivariate and multivariate effect sizes explained no more than 5% of the variance, suggesting that between nation differences are modest and do not oppose radically different self-concepts. Moreover, with the exception of the Interdependent and Group Loyalty factors, the others show low reliabilities.

With the results obtained in our studies, and taking into account mentioned limitations, we can conclude that those people (at least university students) living in developed countries, and cooperative cultures show a (slightly more) relational-interdependent self-construal, and that people living in individualist, hierarchical and competitive cultures share a (slightly less) group-dependent and a (slightly more) independent self-construal.

Future studies should “deconstruct” the interdependence and independence dimensions, differentiating in-group loyalty, which is more related to collectivism, from relatedness, linked to egalitarian and cooperative values, more than to collectivist values. Independence measures should also differentiate sense of uniqueness, related to individualism, from low contextual self, more related to hierarchical and competitive values than to individualism. Our present study, coupled with other research conducted in this same area (and summarized in Oyserman et al’s review), shows how important it is to overcome a dichotomous analysis which “collapses” attitudes and beliefs into stereotypical images. This study also reinforces the importance of going beyond individualism-collectivism (Schwartz, 1994) and of taking into account hierarchical values, or the vertical versus horizontal cultural dimension, and competitive values in order to explain national differences in attitudes and beliefs.







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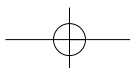
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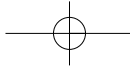
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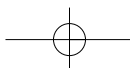
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The Taiwanese students were enrolled in psychology and social science courses and were interviewed by Li Fen Chen in Mandarin while they were attending a Spanish summer course in Salamanca (Spain).

