

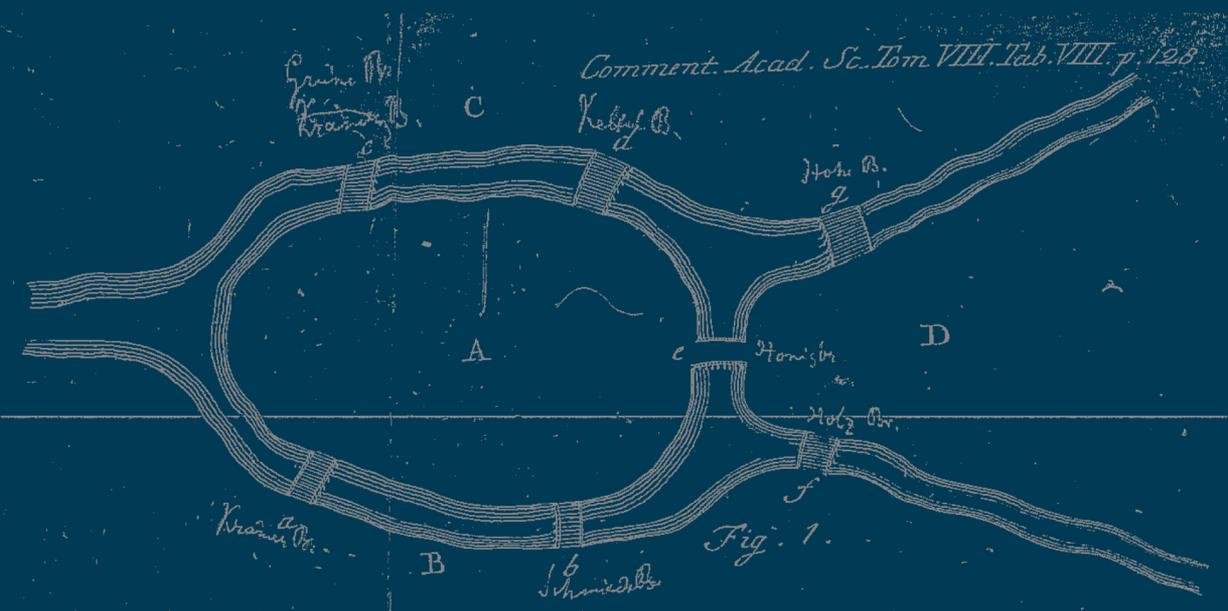
# INTERNATIONAL STUDIES IN TIME PERSPECTIVE

MARIA PAULA PAIXÃO  
JOSÉ TOMÁS DA SILVA

(COORD.)

VICTOR ORTUÑO  
PEDRO CORDEIRO

(EDITORS)



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## CHAPTER 26

### VALIDATION OF THE SPANISH VERSION OF THE CONSIDERATION OF FUTURE CONSEQUENCES SCALE

Alejandro Vásquez

Ana Martín

Alejandro Maiche

Center of Basic Research in Psychology, University of the Republic, Uruguay [avasquez@psico.edu.uy](mailto:avasquez@psico.edu.uy)

**ABSTRACT:** We tested the validity of a Spanish version of Strathman et al.'s (1994) Consideration of Future Consequences Scale (CFC-S). A sample of 158 Uruguayan university students completed the CFC-S scale and the Big Five Personality Inventory. We performed exploratory factor analyses that showed that the scale resembles the bi-factorial structure found in some of the samples with the English version, with a Future and an Immediate sub-scale. Results showed that the CFC Scale has acceptable psychometric properties though refinements are needed: the item 5 presents some problems both in loadings and item-total correlations. Additionally, men scored higher than women on the CFC-I sub-scale and, conscientiousness is the most correlated personality trait with the scale.

**Keywords:** consideration of future consequences, scale adaptation, personality traits, subjective temporality.

#### INTRODUCTION

Time perspective refers to a psychological process, generally unconscious, which role is to organize the ongoing human experience in time and also the conflicts and needs that arise from the confrontation of interests between different partitions of time or temporal dilemmas. Within this process, a more specific concept can be identified, time orientation. It is a personality trait which can predict how people interpret events and make decisions. Consideration of Future Consequences (hereafter CFC) is a specific construct of time orientation. It is defined as the degree in which people “*consider the possible distance of the results of its current behaviors and the extent to which they are influenced by these potential outcomes*” (Strathman, Gleicher, Böninger, & Edwards, 1994). Recent research suggests that the scale is comprised of two factors, one referring to the weight put in the immediate consequences (CFC-I), and other relating to the more distant outcomes (CFC-F). Joireman, Balliet, Sprött, Spangenberg and Schultz (2008) found that the two sub-factors differentially predict the trait self-control, ego depletion and temporal discounting, with the CFC-I scale being the best and unique predictor.

Despite it has been extensively used for approximately 20 years and it was related to relevant behavioral constructs in the English speaking-countries, there is still little research about the cross-cultural validity of the instrument and the underlying factor structure. Thus, the aim of the present work was to evaluate the internal consistency, factor structure and convergent validity of the Spanish version of the Consideration of Future Consequences Scale.

## METHOD

### Participants

A sample of 158 first-year engineering and psychology students (82 males,  $M$  age = 20,0,  $SD$  = 4.7) were recruited at the University of the Republic (Uruguay).

### Instruments

*Consideration of Future Consequences Scale.* The CFC scale has good psychometric properties in its English version (Strathman, Gleicher, Böninger, & Edwards, 1994) and its concurrent validity has been demonstrated consistently in four domains of behavior: (a) academic achievement, economic decision making and preventive health behaviors, (b) prosocial behavior (c) environmental behavior and (d) aggressive behavior (Joireman, Strathman & Balliet, 2006). This scale is composed of 12 items, which are evaluated using a 7-point Likert scale. In the CFC Scale higher numbers indicate a greater consideration of future consequences. Items 3, 4, 5, 9, 10, 11, 12 (CFC- Immediate sub-scale items) are reverse-scored for a general CFC score. Back-translation was used to adapt the English CFC scale to Spanish. In Table 1 we present some of the sample items of the CFC in Spanish.

Table 1 – Sample Items of the CFC Scale – Spanish Version

CFC-Immediate (Factor 1)	CFC-Future (Factor 2)
4. Mi comportamiento solamente está influenciado por los resultados inmediatos (por ej., en cuestión de días o semanas) de mis acciones. 11. Actúo solamente para satisfacer temas inmediatos, imaginando que me ocuparé de futuros problemas que pudieran surgir más adelante.	6. Estoy dispuesto a sacrificar mi felicidad o bienestar inmediato para lograr resultados a futuro. 7. Creo que es importante tomar seriamente las advertencias sobre resultados negativos, incluso si esos resultados no vana ocurrir en varios años.

*Big Five Personality Inventory (BFI).* The BFI is probably the most used instrument to assess personality traits. It classifies and describes personality using five dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience (Benet-Martinez & John, 1998). It also incorporates a scale to measure social desirability. The inventory is composed of a total of 44 items, evaluated using a 5-point Likert scale.

*Sociodemographic Data Questionnaire.* Age and Sex were also collected for further analyses.

### Procedure

The administration of the two instruments was held in a single group session at the beginning of a regular lecture at the University. All subjects gave free and informed consent before completing the questionnaires.

## Data analysis

Traditional psychometric analyses were performed to explore the psychometric properties of the scale. An exploratory factor analysis (EFA) with principal components was carried out. Correlation coefficients between the factors of the CFC and the dimensions of the BFI were calculated.

## RESULTS

The EFA identified two factors, which replicated the factor structure of the English version of the CFC scale proposed by Jaireman *et al* (2008). The solution obtained explains 43.8% of the total variance. Factor 1, CFC-Immediate, relates to higher concerns about immediate consequences of behavior (eigenvalue = 3.5, explained variance = 29.5%) is composed by items 3, 4, 9, 10, 11 and 12. Factor 2, CFC-Future, related to higher concerns for the distant outcomes (eigenvalue = 1.7, Explained variance = 14.3%), being correlated to items 1, 2, 6, 7 and 8. Item 5 did not load to any of the factors in a satisfactory way. In Table 1 we present factor loadings superior to .30 (in italics the loadings of item 5).

Table 2 – Factor loadings of the two factor solution of the CFC in Spanish

Item	Factor 1	Factor 2
1	.33	.33
2		.53
6		.67
7		.76
8		.58
3	.70	.32
4	.78	
5	<i>-.12</i>	<i>-.19</i>
9	.58	
10	.68	
11	.85	
12	.67	

The internal consistency of both factors of the scale was acceptable: Cronbach's alpha = 0.74 for CFC-Immediate and  $\alpha=0.60$  for CFC-Future). The complete scale showed an internal consistency of  $\alpha=0.72$ . Inter-item correlations were acceptable for a broad construct such as CFC (Clark & Watson, 1995). The mean inter-item correlation of the CFC-F was .21 and for the CFC-I was .28. In this case, we should note that Item 5,

correlated negatively or null (below .01) with all other CFC-I items. If that item is deleted the mean inter-item correlation rises to .43.

Concerning relationship of the CFC with personality variables, CFC-Immediate was negatively correlated to Agreeableness, Neuroticism, Openness and Conscientiousness. On the other side, CFC-Future was positively correlated to Openness (Table 3).

Table 3 – Correlations of the CFC with Big Five Personality Factors

	2	3	4	5	6	7	8
1. CFC- Total Score	.71**	-.86**	.14	.18*	.19*	.24**	.24**
2. CFC- Future		-.26**	.10	.05	.14	.21**	.11
3. CFC- Immediate			-.11	-.21**	-.16*	-.18*	-.26**
4. Extraversion				.18*	-.25**	.28**	.06
5. Agreeableness					-.26**	.10	.15
6. Neuroticism						-.10	-.10
7. Openness							.29**
8. Conscientiousness							-

\*  $p < .05$ ; \*\*  $p < 0.01$

Finally, we explored possible sex differences in CFC. As expected, we found that males tend to weight more the immediate consequences of behavior than females (Table 4).

Table 4 – Means and *t* values for sex comparisons

Scale	<i>M</i> (Males)	<i>M</i> (Females)	<i>t</i> ( <i>df.</i> 1, 156)	<i>p</i>
CFC-Immediate	3,4	3,0	2,33	.021
CFC Future	4,6	4,6	0,2	n.s.
CFC-Total	4,6	4,8	-1,56	n.s.

## DISCUSSION

The objective of this research is to validate the CFC Scale to the Spanish language and, more specifically, to the Uruguayan population. Data presented here shows that this objective could be reached.

Concerning the reliability, the Spanish adaptation of the CFC Scale showed acceptable internal consistency, good construct validity, and a two-factor structure, coincident with

the English two factor solution, with a CFC-F subscale and CFC-I subscale. As with the English version, the CFC is related to some personality traits, and presents sex-typed variances.

However, some limitations of our work should be mentioned. Further refinements should be done to improve psychometric properties of the scale. The item 5 shows very low loadings to any of the factors and reduces the internal consistency of the CFC-I subscale. Also, the internal consistency of the CFC Future 5-item scale, despite acceptable for research intentions, could be improved. In this regard, recently Joireman, Shaffer, Balliet, & Strathman (2012) proposed a 14-item CFC scale that improved considerably the internal reliability of the CFC Future sub-scale. Future work should be oriented to add the two new CFC-Future items and re-write the Item 5 that it is of difficult translation. Also, confirmatory factor analyses should be performed to clearly establish the underlying factor structure of the Spanish version of the CFC.

In conclusion, it seems reasonable to use the CFC-Spanish for research on temporal orientation in Uruguayan population. However, future work is needed to guarantee high quality research on the CFC construct in Spanish speaking countries.

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