

# Obsessive themes, evaluative appraisals, and thought control strategies: Testing the autogenous-reactive model of obsessions<sup>1</sup>

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**ABSTRACT.** Obsessive-compulsive disorder (OCD) is considered a heterogeneous condition involving obsessional themes and associated control strategies. This *ex post facto* study was designed to examine the usefulness of the autogenous-reactive model of obsessions on the light of the cognitive approaches proposing that OCD arises from a particular set of dysfunctional beliefs. Three hundred thirty non-clinical adults completed a set of questionnaires assessing obsessional intrusions and related evaluative appraisals, beliefs, and control strategies, as well as OCD and depressive symptoms, anxiety, and worry proneness. The autogenous obsessions were assessed as being more unpleasant and more unacceptable, causing more guilt feelings and producing a greater need to be controlled than the reactive obsessions. The reactive obsessions were appraised as more uncontrollable and more likely to be real. The subjects having autogenous obsessions were more depressed than those displaying reactive obsessions. Finally, the autogenous obsessions showed more relationships with several dysfunctional beliefs and thought control strategies than the reactive obsessions.

**KEYWORDS.** Autogenous obsessions. Reactive obsessions. Obsessive-compulsive disorder (OCD). OCD subtypes. *Ex post facto* study.

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**RESUMEN.** El trastorno obsesivo compulsivo (TOC) se considera una condición heterogénea que comprende temas obsesivos y estrategias de control asociadas. El presente estudio *ex post facto* fue diseñado para estudiar la utilidad del modelo de obsesiones autógenas-reactivas en el contexto de las aproximaciones cognitivas que proponen que el TOC surge a partir de un conjunto determinado de creencias. Trecientos treinta adultos no clínicos completaron un conjunto de cuestionarios que evalúan intrusiones obsesivas y valoraciones relacionadas, creencias, y estrategias de control, así como síntomas obsesivo-compulsivos, depresivos, y tendencia a preocuparse. Las obsesiones autógenas se valoraron como más molestas y más inaceptables, originando más sentimientos de culpa, y produciendo una mayor necesidad de ser controladas que las reactivas. Las obsesiones reactivas se valoraron como más incontrolables y con más probabilidades de convertirse en reales. Los sujetos con obsesiones autógenas estaban más deprimidos que los que presentaban obsesiones reactivas. Finalmente, las obsesiones autógenas mostraron más relaciones con diversas creencias disfuncionales y estrategias de control que las reactivas.

**PALABRAS CLAVE.** Obsesiones autógenas. Obsesiones reactivas. Trastorno obsesivo-compulsivo (TOC). Subtipos de TOC. Estudio *ex post facto*.

**RESUMO.** Considera-se a perturbação obsessivo-compulsiva (POC) uma condição heterogénea que compreende temas obsessivos e estratégias de controlo associadas. O presente estudo *ex post facto* foi desenhado para estudar a utilidade do modelo de obsessões autógenas-reactivas no contexto das aproximações cognitivas que propõem que o POC surge de um conjunto determinado de crenças. Trezentos e trinta adultos não clínicos completaram um conjunto de questionários que avaliam intrusões obsessivas e avaliações relacionadas, crenças e estratégias de controlo, assim como sintomas obsessivo-compulsivos, depressivos, e tendência para se preocupar. As obsessões autógenas valoram-se como mais incapacitantes e mais inaceitáveis, originando mais sentimentos de culpa, e produzindo maior necessidade de ser controladas do que as reactivas. As obsessões reactivas valoram-se como mais incontroláveis e com mais probabilidade de se converterem em reais. Os sujeitos com obsessões autógenas estavam mais deprimidos do que os que apresentavam obsessões reactivas. Finalmente, as obsessões autógenas mostraram mais relações com diversas crenças disfuncionais e estratégias de controlo do que as reactivas.

**PALAVRAS CHAVE.** Obsessões autógenas. Obsessões reactivas. Perturbação obsessivo-compulsiva (POC). Subtipos de POC. Estudo *ex post facto*.

## Introduction

The obsessive-compulsive disorder (OCD) is considered as a single disorder with a well defined subset of symptoms in the current standard diagnostic classifications. However, in the last two decades it has been argued that this mental disorder must be approached as a heterogeneous condition, and several studies have reported on the existence of at least four different obsessive domains, which include not only obsessive themes but associated behaviours as well (Abramowitz, Franklin, Schwartz, and Furr,

2003; Leckman *et al.*, 1997; Summerfeldt, Richter, Antony, and Swinson, 1999): obsessions on aggressive, sexual, religious and somatic themes, with checking behaviours; symmetry obsessions with ordering/arranging, counting and repeating rituals; contamination obsessions and cleaning rituals; and hoarding obsessions with hoarding and collecting behaviours. Other studies suggest that these subgroups of obsessional themes and associated behaviours could have some similarities with other mental and/or neurological disorders, such as Tourette's syndrome, hypochondriasis, body dysmorphic disorder, autism, pathological gambling, or dissociative experiences (Baer, 1994; Hollander and Wong, 1995), thus proposing the idea of an obsessive-compulsive spectrum of disorders.

A somewhat different approach to the heterogeneity of the OCD has been recently suggested by Lee and Kwon (2003), who have proposed an obsession model that classifies obsessions into two different subtypes, namely "autogenous" and "reactive", on the basis of their contents, which elicit different emotional reactions, evaluative appraisals and control strategies (Lee and Telch, 2005). The main source of differences between the two modalities refers above all to the obsessional themes: common themes of autogenous obsessions would be aggressive, sexual and blasphemous or repulsive images, thoughts or impulses, and they could be the basis for developing a pure obsessive disorder. In fact, the autogenous themes resemble a cluster of OCD symptoms identified in most of the studies (Mataix, Rosario-Campos, and Leckman, 2005), and they are related to the classic concept of "pure obsessions", characterized as a pure cognitive disorder and as a symptom of OCD (Rachman and Hodgson, 1980; Rachman and Shafran, 1998) and the focus of Rachman's cognitive theory about obsessions (Rachman, 1997, 1998, 2003).

In contrast, typical reactive obsession themes would be contamination, mistakes, accidents, asymmetry or disarray, and they could lead to compulsions such as washing, checking, ordering or hoarding. Besides these differences, the authors also suggest other characteristics, such as the identifiability of the evoking stimuli, the egodistonia caused by the obsessions and/or compulsions, and the perceived rationality of the obsessive thought content. Autogenous obsessions tend to come abruptly into consciousness without an identifiable evoking stimuli, they are perceived as ego-dystonic and aversive, and they are actively rejected by subjects mainly because of their contents. Reactive obsessions are evoked by more identifiable external stimuli, they are perceived as relatively realistic, and people usually do something "rational" to fight against the stimuli (*e.g.*, contamination-washing). From this point of view, the stimuli and situations that are able to elicit reactive obsessions are usually realistic and logically connected with the thought content, whereas in the autogenous obsessions the evoking stimuli are not as directly connected with the obsessive thought, or they have a more indirect relationship (*e.g.*, being in a railway station and having the thought of pushing a stranger).

The autogenous-reactive model also argues that the respective contents of each subtype are the main source of influence in developing a different cluster of evaluative appraisals and control strategies. Autogenous obsessions are especially associated with evaluative appraisals about the importance of the thought and its control, while reactive obsessions are above all related to responsibility appraisals. As for the control strategies, Lee and Kwon (2003) postulate that autogenous obsessions are linked to avoidance

strategies designed to control or suppress the thoughts themselves (*e.g.*, thought stopping, distracting activities, counter-imagining, self-punishment). However, reactive obsessions lead to a more realistic confrontation with the evoking stimulus, in order to modify the problematic situations or to put the individual back in a safe or desired state, usually by means of overt compulsions (*e.g.*, washing, ordering, checking, and hoarding). Lee, Lee, Kim, Kwon, and Telch (2005) have recently proposed a continuum between autogenous obsessions and worry, with the reactive obsessions falling in between them. The continuum refers to the following variables: appraisal content, identifiability of thought triggers and manifestation modalities (impulses, thoughts, images, urges). Lee and Kwon (2003) test their hypothesis in the context of an investigation on the intrusive thoughts in normal people, using the Revised-Obsessive Intrusions Inventory (ROII; Purdon and Clark, 1993, 1994), which has been shown to reliably detect and evaluate intrusive thoughts analogous to clinical obsessions.

The general purpose of the current *ex post facto* study (Montero and León, 2005; Ramos-Álvarez, Valdés-Conroy, and Catena, 2006) was to obtain support for the proposed two modalities of obsessional symptom presentations, in light of current cognitive models proposing that the OCD arises from a particular set of dysfunctional beliefs (Clark, 2004; Frost and Steketee, 2002; Salkovskis, 1996). There are three specific objectives. The first is to explore the differences between two groups of subjects, characterized as having autogenous or reactive intrusive thoughts, on a subset of variables related to their most upsetting intrusive thought: frequency, unpleasantness, evaluative appraisals, and control strategies. The second objective is to study the differences between the autogenous and reactive obsessional subjects with regard to obsessive and depressive symptoms, anxiety, and proneness to worry. The third objective is to analyze the associations between the two subtypes of intrusive thoughts and meta-cognitive variables, that is, general dysfunctional beliefs and thought control strategies.

## Method

### *Participants*

The subjects were 330 normal Spanish people (200 women and 130 men), with a mean age of  $27 \pm 10$  years (ranging from 19 to 62 years). The age distribution showed that 66% of the subjects were between 20 and 27 years of age. Most of them were single (79%), with a medium socio-economic level (67.7%), and they had undertaken advanced (university) studies (65%). Subjects reporting diagnosed mental disorders, taking psychotropic medication, or having received psychological treatment in the last year were not included in the study.

### *Instruments*

- Revised Obsessional Intrusions Inventory (ROII; Purdon and Clark, 1993, 1994). This is a self-report questionnaire designed to assess the presence and frequency of unwanted intrusive thoughts, images and impulses having an egodystonic content, analogous to clinical obsessions, as well the appraisals and control

strategies associated with the most upsetting intrusive thought referred to by the subjects. The instrument has two parts. The first part consists of 52 statements concerning thoughts of aggression, sex, dirt, and contamination. Respondents rate each statement on a 7-point scale from 0 “I have never had this thought” to 6 “I have this thought frequently during the day”. A ROII total score (frequency of intrusive thoughts) is derived by adding the scale scores for the 52 items. In the second part, subjects are required to select from the previous list the single most upsetting intrusive thought that they have experienced at least “rarely” (score = 1), and then to evaluate it along ten appraisal dimensions (unpleasantness, guilt, worry thought will come true, uncontrollability or difficulty to remove, unacceptability, likelihood that thought will come true, importance of control, harm/danger, responsibility, and desire to avoid thought triggers), using 5-point scales from 0 (absolutely nothing) to 4 (extremely). After this, subjects are presented with a list of ten possible thought control strategies and they are asked to rate from 0 (never) to 4 (always) to what extent they use each of these strategies to deal with the most upsetting intrusive thought previously chosen. Lee and Kwon (2003) conducted exploratory and confirmatory factor analysis that revealed a consistent two-factor structure corresponding to the autogenous-reactive model: an autogenous obsession factor (41 items) and a reactive obsession factor (11 items). In the Spanish version of the instrument (Belloch, Morillo, Lucero, Cabedo, and Carrió, 2004; Morillo *et al.*, 2003) a two-factor solution was also obtained. The first factor included 41 intrusive thoughts on aggression, and sexual and socially unacceptable behaviours (items 1 to 21, and 25 to 44), whereas the second factor contained 11 intrusive thoughts referring to doubts, fears of contamination and checking behaviours (items 22 to 24, and 45 to 52). This factor structure was identical to the one reported by Lee and Kwon (2003). For data analyses, subscale frequency scores were computed separately for autogenous (first factor) and reactive (second factor) intrusive thoughts, by adding the 41 autogenous items and the 11 reactive items. The first factor is labelled the “autogenous subscale”, and the second factor is called the “reactive subscale”.

- Obsessive Beliefs Inventory (*Inventario de Creencias Obsesivas, ICO*; Belloch, Cabedo, Morillo, Lucero, and Carrió, 2003; Cabedo, Belloch, Morillo, Giménez, and Carrió, 2004; Giménez, Morillo, Belloch, Carrió, and Cabedo, 2004). This is an 82-item self-report questionnaire designed to evaluate dysfunctional beliefs hypothetically related to the maintenance and/or the development of the OCD. It was designed following the preliminary work of the Obsessive Compulsive Cognitions Working Group (OCCWG, 1997, 2001, 2003), with some items originally developed to tap the six dimensions proposed by this group, and some items derived from other previously created instruments, such as the Thought-Action Fusion Scale (Shaffran, Thordarson, and Rachman, 1996) and the Responsibility Attitude Scale (Salkovskis *et al.*, 2000). Participants were asked to rate whether they agree or not from 0 (absolutely disagree) to 7 (absolutely agree) with different sentences corresponding to general dysfunctional beliefs.

The *ICO* contains eight subscales: a) inflated responsibility; b) over-importance of thoughts; c) thought-action fusion, probability; d) thought-action fusion, moral; e) importance of thought control; f) over-estimation of threat; g) intolerance of uncertainty; and h) perfectionism. The instrument showed an excellent internal consistency ( $\alpha$  values ranging from .75 to .89 for the subscales; total score  $\alpha = .94$ ) and temporal stability (intraclass correlation coefficient for the total score was .80, and values ranging from .70 to .93 for the eight subscales). All subscales successfully discriminated between subclinical OCD subjects (according to the MOCI score) and normal participants.

- White Bear Suppression Inventory (WBSI; Wegner and Zanakos, 1994). This is a 15-item self-report inventory that measures the chronic tendency to suppress negative and/or unwanted thoughts in general. WBSI items are scored on a 5-point Likert scale from 1 (absolutely disagree) to 5 (absolutely agree). The Spanish version of the instrument has been applied (Lucero, 2002).
- Thought Control Questionnaire (TCQ; Wells and Davies, 1994). This is a 30-item self-report instrument that assesses the frequency of different strategies used to control unpleasant or unwanted thoughts. The strategies are clustered into five factor analytically derived subscales: distraction, punishment, reappraisal, social coping and worrying. Items are scored on a 4-point Likert scale from 1 (never) to 4 (almost always). We used the validated Spanish version (Lucero, 2002).
- Maudsley Obsessive Compulsive Inventory (MOCI; Hodgson and Rachman, 1977; Rachman and Hodgson, 1980). The MOCI is a widely used self-report questionnaire that evaluates obsessive-compulsive symptomatology. It consists of 30 true/false items describing various obsessive-compulsive symptoms such as cleaning, slowness, checking, and doubting.
- Beck Depression Inventory (BDI; Beck and Steer, 1987). This is a self-report instrument that is widely used and validated to measure depressive symptoms. Subjects have to rate the severity of 21 depressive symptoms on a 4-point scale ranging from 0 (symptom not present) to 3 (symptom very intense). BDI total scores range between 0 and 63. The Sanz and Vázquez (1998) Spanish version was used.
- State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, and Lushene, 1970). This is a 40-item self-reported measure of general anxiety. The first 20 items (STAI-S) assess state anxiety, or how the subject feels right now. The second 20 items (STAI-T) assess trait anxiety, or how the subject generally feels. In the present study, we only used the state Spanish version developed by Seisdedos (1988).
- Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, and Borkovec, 1990). This is a 16-item self-report inventory that assesses excessive and uncontrollable worry. The items are focus on the excessiveness, duration and uncontrollability of worry and related distress. Each item is rated on a 5-point scale from 1 (not at all typical of me) to 5 (very typical of me). The Spanish validated version has demonstrated good reliability (Cronbach  $\alpha = .89$ ) and a solid unifactorial structure (Sandín and Chorot, 1991).

### Procedure

The recruitment of subjects was carried out using as a basis a series of seminars for final-year psychology students that were trained in the purpose of the study, the current OCD cognitive models, and to use the instruments. As a result, twenty-two students were selected to collaborate with the authors in data collection. Each of the collaborators administered the assessment instruments individually to five or seven subjects. In all cases, the instruments were fulfilled in only one session lasting 90 minutes approximately, in the presence of the administrator. The instructions about the requirements for selecting the sample of subjects were as follows: aged between 18 and 60 years, having a good reading level, and not having a recent history of mental disorders or disabling medical disease (in the preceding year). We also required students to not collect the data exclusively from their relatives.

## Results

### *Differences between autogenous and reactive intrusive thoughts: preliminary analyses*

The ROII was used in order to differentiate the two subtypes of autogenous or reactive intrusive/obsessional thoughts. The most upsetting intrusive thought selected by each subject was categorized as autogenous or reactive, according to the factor structure of the ROII described above. Of the 330 participants, 234 subjects (70.9%) selected an autogenous obsession as their most upsetting intrusive thought (“Autogenous intrusive thought group”, AIT-G), and 96 subjects selected a reactive intrusion (“Reactive intrusive thought group”, RIT-G). Significant differences between groups on the frequency of occurrence of the most upsetting intrusive thought ( $t_{(328)} = 2.99, p < .01$ ) were observed, being the average frequency of reactive thoughts ( $M = 3.1, SD = 1.7$ ) higher than those of the autogenous ( $M = 2.3, SD = 1.3$ ). A Chi-squared analysis indicated that there was an equal gender distribution in the autogenous and reactive groups ( $\chi^2_{328} = .91, p = .34$ ), and there were no age differences between them ( $t_{(328)} = 1.32, p = .75$ ).

### *Differences between autogenous and reactive obsessive groups on frequency, unpleasantness, valorative appraisals, and control strategies of their most upsetting intrusive thought*

All the analyses were made twice: on the basis of the whole sample, and selecting those subjects whose most upsetting intrusive thought was experienced “once or twice a month” to “frequently during the day” in the ROII scale. The results were almost identical, being the difference exclusively related to the size of the statistically significant results that was higher when the whole sample was the source of analyses. Only the results obtained on the reduced sample have been reported here. There were 75 subjects included in the autogenous group and 45 in the reactive group. The two groups did not differ on the frequency with which they experienced their most upsetting intrusive thought ( $t_{(118)} = 1.82, p = .07$ ), with the frequency of the reactive thoughts ( $M = 4.23, SD = 1.24$ ) being slightly higher than that of the autogenous ( $M = 3.71, SD = .95$ ). The AIT-G scored higher ( $M = 46.6, SD = 26.44$ ) than the RIT-G ( $M = 20.8, SD = 18.27$ ) on the autogenous intrusive thoughts subscale ( $t_{(118)} = 4.21, p < .0001$ ), as was expected,

but there were no differences between groups on the total score of the reactive intrusive thoughts subscale ( $M = 15.4$ ,  $SD = 7.1$  by RIT-G;  $M = 13.9$ ,  $SD = 9.3$  by AIT-G;  $t_{(118)} = .72$ , *ns*). This means that the subjects in the AIT-G reported having the same rate of reactive intrusions as the subjects in the RIT-G. In contrast, the individuals in the RIT-G exhibit a lower rate of autogenous intrusions than that reported by the autogenous subjects. This same pattern of results was obtained with the entire sample.

Next, *t*-tests were calculated in order to examine the differences between AIT-G and RIT-G on the evaluative appraisals and control strategies of their most upsetting thought, as measured with the ROII-part 2. When heterogeneity of group variances was found, the Welch-Satterwhite correction was applied. As shown in Table 1, the AIT-G scored their most upsetting thought higher than the RIT-G on the appraisals of unpleasantness, guilt, unacceptability of the thought, and importance of control of that obsessional thought. In contrast, the subjects from the RIT-G scored higher on uncontrollability and likelihood thought will come true. The highest mean score for both groups was on the unpleasantness appraisal.

The analyses of the differences between the AIT-G and RIT-G on the strategies used to control the most upsetting intrusive thought indicate that the AIT-G used a suppression strategy more frequently than the RIT-G ("Tell myself to stop"), whereas the RIT-G employed more the strategy of "Reassure myself".

**TABLE 1.** Evaluative appraisals and control strategies of the most upsetting thought in autogenous and reactive subjects: Means, (standard deviations), and *t* values.

<i>Revised-Obsessional Intrusions Inventory(ROII)</i>	<i>Autogenous</i> ( <i>n</i> = 75)	<i>Reactive</i> ( <i>n</i> = 45)	<i>t</i>
<i>Evaluative appraisals</i>			
Unpleasantness	2.89 (1.04)	1.70 (1.02)	2.01*
Guilt	1.54 (1.27)	.73 (1.04)	2.92***
Worry thought will come true	1.33 (1.37)	1.62 (1.35)	-.87
Uncontrollability	.80 (1.03)	1.50 (1.42)	-2.20**
Unacceptability	2.15 (1.17)	1.42 (1.33)	2.41**
Likelihood will come true	.74 (1.04)	1.42 (1.10)	-2.62**
Importance of control	2.07 (1.23)	1.08 (1.32)	3.17**
Harm/danger	1.17 (1.37)	.77 (1.33)	1.21
Responsibility	1.13 (1.06)	1.08 (1.49)	.17
Desire to avoid triggers	1.20 (1.25)	1.31 (1.38)	1
Total Score	15.13 (8.09)	14.08 (10.45)	.47
<i>Control strategies</i>			
Covert distraction	2.11 (1.25)	2.12 (1.32)	-.02
Overt neutralizing	1.83 (1.16)	1.54 (1.27)	.97
Overt distraction	1.80 (1.34)	1.96 (1.56)	-.44
Covert neutralizing	2.28 (1.24)	2.04 (1.25)	.80
Reason with self	2.67 (1.35)	2.54 (1.17)	.42
Seek reassurance-others	1.24 (1.45)	1.15 (1.46)	.24
Tell myself to stop	2.39 (1.27)	1.50 (1.50)	2.67**
Do nothing	.59 (1.10)	.77 (1.17)	-.65
Say a prayer	.50 (1.02)	.38 (.57)	.61
Self-Reassurance	1.98 (1.43)	2.88 (1.13)	-1.98*
Total Score	17.74 (8.83)	16.15 (6.86)	.84

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



*Association of autogenous and reactive intrusions with obsessive, anxious and depressive symptoms*

First, unpaired *t*-tests were computed to examine the differences between AIT-G and RIT-G in obsessive, depressive and anxious symptoms. Both groups were equivalent on MOCI ( $t_{(328)} = -1.03, p = .75$ ), STAI-S ( $t_{(328)} = 1.55, p = .12$ ), and PSWQ ( $t_{(328)} = 1.65, p = .65$ ), but the autogenous group obtained higher scores on the BDI ( $M = 8.8, SD = 8.6$  vs.  $M = 6.6, SD = 5.6; t_{(328)} = 2.40, p = .02$ ). The same results were observed when the differences between groups were analyzed selecting only those subjects who experienced their most upsetting thought with a high frequency (from “once or twice a month” to “always”).

In order to rule out the possibility that the observed differences between AIT-G and RIT-G subjects could be best explained by the observed differences in depression, zero-order and partial correlations controlling for the BDI score on the autogenous and reactive obsession subscales, and the measures of obsessive-compulsive, depressive and anxious symptoms, were calculated. As shown in Table 2, the pattern of inter-correlations was markedly different for the autogenous and the reactive intrusions. The reactive intrusions were more significantly associated with the MOCI scores than the autogenous ones were. And after controlling for BDI, all the MOCI subscales remained related to the reactive subscale, whereas the previously observed associations between the MOCI and the autogenous subscale disappeared, with the only exception of the slowness and repetition subscale. Neither the autogenous nor reactive subscales were related to the anxiety measure (STAI-S), and their relationships with PSWQ disappeared after controlling for BDI.

**TABLE 2.** Zero order and (partial correlations after controlling for BDI) among autogenous and reactive intrusions and symptom measures.

<i>Questionnaires</i>	<i>ROII- Autogenous</i>	<i>ROII- Reactive</i>
MOCI-Washing	.14* (.09)	.45*** (.44)***
MOCI-Checking	.20** (.11)	.40*** (.35)***
MOCI-Slowness/repetition	.22** (.14)*	.28** (.24*)
MOCI-Doubting	.18* (.06)	.38*** (.33)***
Total score MOCI	.22** (.10)	.51*** (.47)***
Beck Depression Inventory	.23*** --	.24* --
STAI-S	.13 (-.12)	.16 (.01)
PSWQ	.15* (.02)	.27** (.16)

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

In our previous analyses exploring the differences between AIT-G and RIT-G subjects (results on Table 1), we did not take into consideration the load of BDI. However, given that at the present stage of the results the depression score emerged as a source of between-groups differences, we conducted an ANCOVA analysis with the BDI score as covariate. The results were almost identical to the previously observed.

*Associations between autogenous and reactive intrusions, dysfunctional beliefs and thought control strategies*

The associations of autogenous and reactive subscales with the general cognitive and meta-cognitive variables, as measured by the WBSI, TCQ and *ICO* questionnaires, were calculated with and without taking into consideration the load of depression scores (zero-order and partial correlations, respectively). All the analyses were performed twice: on the basis of the entire sample as in the previous analyses, and selecting those subjects who reported having a high frequency of their most upsetting thought (from “once or twice a month” to “frequently during the day”). The results were not comparable. For this reason, and in order to maximize the clinical relevance of data, only the results obtained from the reduced sample have been reported here.

As seen in Table 3, a different pattern of inter-correlations was found in AIT-G and RIT-G. As for the dysfunctional beliefs (*ICO*), whereas the autogenous subscale was related to importance of thoughts and perfectionism, the reactive subscale was only associated with the TAF-morality bias (negative correlation), which was maintained and increased after partialling for the BDI score. However, in the autogenous correlation matrix, three not previously observed associations emerged when the load of BDI was partialled-out: TAF-moral, importance of controlling the thoughts, and overestimation of harm/danger associated with the thoughts. With regard to the thought control strategies, the general tendency to suppress thoughts, as measured with the WBSI, was only related to the autogenous intrusions subscale. As for the control strategies measured with the TCQ, the autogenous intrusions were significantly associated with worry, punishment and reappraisal strategies, before and after controlling for the depression score, whereas the reactive intrusions were only related to worry after the load of depression was controlled.

**TABLE 3.** Zero order and (partial correlations after controlling for BDI) among autogenous and reactive intrusions, meta-cognitive beliefs, and thought control strategies.

<i>Questionnaires</i>	<i>Autogenous</i> ( <i>n</i> = 75)		<i>Reactive</i> ( <i>n</i> = 45)	
<i>Obsessive Beliefs Inventory (ICO)</i>				
Over-responsibility	.13	(-.12)	.10	(.08)
Importance of thoughts	.25*	(.28)*	.16	(.14)
TAF- Moral	.01	(.25)*	-.31*	(-.40)**
TAF- Likelihood	.05	(-.14)	.20	(.16)
Importance of controlling	.06	(.32)**	.17	(.19)
Overestimation of harm	.10	(.25)*	.07	(.07)
Intolerance to uncertainty	.11	(.07)	.15	(-.07)
Perfectionism	.31**	(.38)**	.08	(.02)
<i>White Bear Suppression Inventory</i>	.39***	(.22)*	-.14	(-.22)
<i>Thought Control Questionnaire</i>				
Distraction	.03	(.03)	.02	(.06)
Social control	.07	(.16)	.03	(-.01)
Worry	.35***	(.44)**	.25	(.29)*
Punishment	.34**	(.28)*	.22	(.21)
Reappraisal	.32**	(.32)**	.01	(.02)

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

## Discussion

This study was designed to examine the usefulness of the autogenous-reactive model of obsessions (Lee and Kwon, 2003; Lee *et al.*, 2005; Lee and Telch, 2005), on the light of the current cognitive approaches which proposes that OCD arises from a particular set of dysfunctional beliefs. From this point of view, the obsessive themes could be considered as a prime that activates dysfunctional beliefs and associated control strategies. The preliminary data obtained revealed that when the subjects are required to select their most upsetting intrusive thought, the vast majority selected an autogenous intrusion. However, the frequency with which this most upsetting thought was experienced was lower when the content was autogenous than when it was reactive. These same results were also reported by Lee and Kwon (2003) in their second study. Taken together, these data suggest that, at least in normal subjects, the frequency with which an undesirable thought is experienced does not maintain a clear relationship with the distress caused by the unexpected irruption of the thought. Nevertheless, a more parsimonious explanation has to do with the explicit requirement given to the subjects in the ROII: the respondents are required to select their most upsetting intrusion from a list, but not the most frequently experienced. An unexpected result was the difference between the two groups of subjects in their scores on all the autogenous intrusive thoughts (*i.e.*, autogenous subscale score) and all the reactive thoughts (*i.e.*, reactive subscale score). The individuals characterized as “autogenous” have more frequent autogenous-type intrusions, as was expected, but they also report having reactive intrusions at the same rate as the reactive subjects. On the other hand, “reactive” subjects reported having a low frequency of autogenous intrusive thoughts. This aspect was not reported by Lee and colleagues. In our opinion, it is an important piece of data because it cast doubt on the distinction between two separate subtypes of obsessions, indicating instead the existence of a continuum between the autogenous and reactive obsessions. If this conclusion is adequate, it would support a dimensional characterization of these two OCD themes, with the autogenous patients at one end of the dimension, the normal subjects at the opposite end, and the reactives in an intermediate stage. In fact, in a recent paper Lee and Telch (2005) pointed out this possibility as a more reasonable approach than their initial consideration of two separate subtypes.

Regarding the differences between the two types of intrusive thoughts on the basis of their respective evaluative appraisals, the results obtained are highly consistent with the reported by Lee and Kwon (2003). Therefore, in this respect the hypothesis of the autogenous-reactive model is supported. The autogenous intrusions lead to greater guilt feelings, and they are appraised as more unpleasant, less acceptable and more necessary to keep under control. On the other hand, the reactive intrusions are rated as being more difficult to control and also more realistic (*i.e.*, “Likelihood that the thought will come true”). However, in opposition to the autogenous-reactive model, we did not find higher responsibility specific appraisals in the reactive intrusions.

The results about the strategies used to control the most upsetting thought are consistent with the prediction of the autogenous-reactive model, since the autogenous obsessions lead to a covert strategy (to suppress the upsetting thought), whereas the reactive group employed self-reassurance more (“Reassure myself that everything is

okay”). The autogenous-reactive model also hypothesizes a greater use of confrontational strategies in the reactive obsessions, including taking some action to put things back to a safe or desired state. Our results are not entirely consistent with this last hypothesis, as we did not find a greater use of overt actions in response to the intrusions in the reactive group or a greater use of reassurance seeking from other persons. Perhaps the reactive intrusions are clearly associated with neutralizing behaviours, that is, preventive and/or restoring activities, only in clinically obsessive patients. However, in the normal subjects these intrusive thoughts (*i.e.*, doubts to have the stove on) are followed by self-reassurance activities, but not by real confrontational behaviours in order to prevent the feared disaster. The observed differential characterization of autogenous and reactive subjects with regard to their evaluative appraisals and control strategies used to manage their most upsetting thought, remained stable when the load of BDI was controlled. Consequently, we can reasonably assume that the differences in the appraisals and strategies between autogenous-type and reactive-type intrusive thoughts are not the result of a more depressive state in the former.

As a whole, the results on the subjective reactions to the intrusions suggest that the contents of autogenous obsessions are related to moral judgments: they are experienced as being more unpleasant and morally unacceptable in their own right than the reactive ones. The subject is upset and feels guilty for having those thoughts, and he/she is motivated to suppress the thought. Meanwhile, the contents of reactive obsessions are associated with a less negative emotional reaction, as they induce lower unpleasantness and guilt ratings. However, in this latter case the subject is worried about the occurrence of negative consequences in the “real” world, and he or she is not upset by the presence of the thought itself, but rather its occurrence, that is, the feared negative outcome. These conclusions are closely related to the differences between the two subtypes of obsessions hypothesized by Lee and Kwon (Lee and Kwon, 2003; Lee *et al.*, 2005).

Our second objective was to explore the differences between autogenous and reactive subjects on questionnaires on obsessive, anxious and depressive symptoms. The results showed that both groups had similar levels of obsessive and anxious symptoms, but the autogenous group was slightly more depressed. In this last aspect our results differ from those reported by Lee *et al.* (2005), since they found no differences between their autogenous and reactive groups regarding their depression level. The higher score obtained in the BDI by the subjects included in the autogenous obsessions group should be verified in clinical OCD samples: in this case, the results may indicate that the OCD-autogenous patients were more vulnerable to presenting a co-morbid depressive disorder. When the associations among symptom measures and the two modalities of obsessions were examined taking into account the load of depression, we found that the reactive obsessions were associated with obsessive-compulsive symptoms as in the study by Lee *et al.* (2005), whereas in the autogenous intrusions the previously observed relationships disappeared, except for the slowness/repetition component. This result must be explained taking into consideration the contents included in the MOCI, an instrument in which the reactive obsessions are well-recorded, whereas the autogenous are under-represented. In any case, the fact that the reactive intrusions were undoubtedly associated with compulsive symptoms, as assessed by the MOCI, implies additional support for the similarity

between the reactive obsessions and the OCD with overt compulsions. As for the relationships between both subtypes of intrusions and anxiety and worry measures, there was a weak but significant association between reactive intrusions and worry, as was also reported by Lee *et al.* (2005), which suggests that the contents of reactive obsessions are nearer to worry concerns than the autogenous. But it must also be pointed out that the size of the correlation coefficient is small, thus supporting the differences between obsessions and worry (Langlois, Freeston, and Ladouceur, 2000a, 2000b; Wells and Morrison, 1994).

Our third objective was not explored by Lee and Kwon (2003; Lee *et al.*, 2005). However, in our opinion it is useful to examine the possibility that the two proposed subtypes of obsessions are linked to different patterns of dysfunctional beliefs, specifically those that are being proposed as vulnerability factors to OCD by the current cognitive models (Clark, 2004; Frost and Steketee, 2002; Salkovskis, 1996). Finding substantive differences in these meta-cognitive beliefs, could provide evidence for a specific cognitive vulnerability to each OCD subtype. The results indicate that the dysfunctional meta-cognitive beliefs are much more clearly associated with the autogenous contents than with the reactive ones. However, our data also reveal that the associations between the two hypothesized subtypes of obsessional contents and the dysfunctional meta-cognitive beliefs about the subjects' own thoughts are weak, as is shown by the small size of the correlation coefficients obtained. This could be due in part to the fact that the study was conducted with a non-clinical sample of subjects. Nevertheless, as we selected those subjects who reported having an intrusive and upsetting thought with moderate to high frequency, other explanations might also be possible. First of all, perhaps the mutual influences among obsessional contents and meta-cognitive dysfunctional beliefs are only activated when the contents of obsessional thoughts are clearly linked with the domains covered by those beliefs. Secondly, exclusively evaluating meta-cognitive beliefs with self-informed questionnaires, and with a cross-sectional strategy, may be insufficient. It might be useful to combine the psychometric measures with other procedures, such as the use of priming methodologies and/or longitudinal measure strategies, in order to adequately approach the meta-cognitions assessment. And third, it is also possible that the instrument we used was not reliable or valid for assessing dysfunctional meta-cognitive beliefs about one's own thoughts. Nevertheless, we think that this possibility is not likely, not only because the data on reliability and validity of the *ICO* are satisfactory, but also due to the fact that other recently published studies using a well-validated instrument, the Obsessive Beliefs Questionnaire (OCCWG, 2001, 2003, 2005), have obtained similar results to those obtained in the present study. Taylor *et al.* (2006) reported that a group of high-OCD patients scored higher than other anxious control patients on the three factor-analytic types of OCD-related beliefs: responsibility and the tendency to overestimate threat, perfectionism and intolerance to uncertainty, and over-importance and over-control of thoughts. However, the scores of a group of low-OCD patients did not differ from those obtained by a group of control students.

As for the general strategies to control thoughts, we obtained a different pattern associated with each of the two subtypes of obsessions: the score of the autogenous subjects in the autogenous subscale was consistently related to a tendency to suppress

the undesirable thoughts (WBSI), as well as worry, punishment, and reappraisal, whereas the score of the reactives in the reactive subscale was only associated with worry. As a whole, these results suggest that the autogenous obsessions are most linked to general dysfunctional beliefs and control strategies than the reactives are, thus indicating that these meta-cognitions may play an important role in the autogenous obsessions, whereas they are not too relevant in explaining the reactive obsessions. This conclusion is similar to the one proposed by Taylor *et al.* (2006).

Finally, our results suggest that the specific content of an obsessive thought must be taken into account in order to explain the development and/or the maintenance of the OCD. Some thought contents more easily activate certain beliefs by themselves than others: if a mother has the intrusion that she can cause harm to her beloved baby, it is more than reasonable to assume that these thoughts will be judged as undesirable in their own right, that she will have guilty feelings, and that she may have some doubts about her morality and try to suppress the thought. However, when the intrusive thoughts refer to doubts and concerns about daily activities (*i.e.*, "Have I left the heat on in the house?"), the perceived threat tends to lie not in the content of the thought itself, but rather in its possible negative consequences ("..and may this cause a fire?"). If this conclusion is reasonable, the cognitive approaches proposing that OCD arises from a particular set of dysfunctional beliefs (Clark, 2004; Frost and Steketee, 2002; Salkovskis, 1996) could be especially useful in explaining the autogenous obsessions.

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