

Metaphor and Cultural Narratives of the Economy: Analyzing Symbolic Value under the Context of the 2008 Financial Crisis and Its Aftermath

*This article has two interconnected goals: 1) to provide an updated view regarding metaphor and social neuroscience concerning analogical cognition/modeling; 2) to analyze how metaphoricity activates hegemonic cultural narratives of the economy under the context of the 2008 Financial Crisis and its aftermath in a sample of Spanish press outlets and, via symbolic value cross-comparison analysis, in *Todo lo que era sólido* (2013) by Antonio Muñoz Molina and in *En la orilla* (2013) by Rafael Chirbes. Both texts offer transposable conditions for scalability.*

Keywords: *metaphor, cultural narratives of economy, 2008 Financial Crisis, Antonio Muñoz Molina, Rafael Chirbes*

*Este artículo tiene dos objetivos interconectados: 1) proporcionar una visión actualizada sobre la metáfora y la neurociencia social con respecto a la cognición/modelado analógico; 2) analizar cómo la metaforicidad activa las narrativas culturales hegemónicas de la economía en el contexto de la crisis financiera de 2008 y sus repercusiones dentro de una muestra de medios de prensa españoles y, mediante un análisis de comparación cruzada de valores simbólicos, en *Todo lo que era sólido* (2013) de Antonio Muñoz Molina y en *En la orilla* (2013) de Rafael Chirbes. Ambos textos ofrecen condiciones de transferencia para la escalabilidad.*

Palabras clave: *metáfora, narrativas culturales de economía, crisis financiera 2008, Antonio Muñoz Molina, Rafael Chirbes*

PROGRESS BEYOND THE STATE OF ART

In “Euro Crisis Metaphors in the Spanish Press,” Ángel Arrese presents, from an economic studies perspective, a significant contribution regarding the use of economic metaphors in framing the 2008 financial crisis. Arrese’s study is based on two central working hypotheses.¹ Hypothesis 1 (H1) states

that “[i]t is expected that the dominant conceptual metaphors used in the press coverage of the European sovereign debt crisis will be the most traditional ones”; and the second (H2), that “[i]t is expected that the use of metaphors in the different newspapers analyzed [*ABC, El Mundo, El País, Expansión*] follows similar patterns [in terms of prevalence and ranking (DISEASE, NATURAL, MECHANICAL, WAR, SPORT & ENTERTAINMENT, ORGANISM)] despite the different ideological orientation and degree of specialization of publications” (28). According to Arrese’s findings, both H1 and H2 were confirmed by the data offered in his work (28-32). Therefore, one of the significant contributions of Arrese’s study was to demonstrate that crisis metaphors contribute to articulating in public discourse the mediated representation of systemic crises as uncontrollable and unaccountable, while also displaying universality “in the use of and weight of the main economic metaphors ... regardless the editorial and thematic diversity of newspapers.” Moreover, Arrese concluded that

Further testing of these findings in a different context and, above all, in transnational comparative studies could be both interesting and worthwhile. In addition, it may also be worth exploring the extent to which the uniformity in the use of conceptual economic metaphor corresponds or not with the use of the same specific metaphors and keywords. (32)

Taking Arrese’s study as a point of departure, I build up knowledge from his findings and, in fruitful complementarity, from my previous research and published work on cultural narratives, metaphoricity, literature, crisis, and social change. Furthermore, I explore specific press and literary production related to the 2008 financial crisis and its aftermath.² I aim to achieve a twofold interconnected goal: 1) to provide an updated state of the art regarding metaphor and social neuroscience concerning analogical cognition/modeling; 2) to analyze how metaphoricity activates hegemonic cultural narratives about the 2008 financial crisis and its aftermath in a Spanish press outlets sample and, via symbolic value cross-comparison analysis, in the novels *Todo lo que era sólido* (2013)³ by Antonio Muñoz Molina and *En la orilla* (2013)⁴ by Rafael Chirbes, as both texts offer transposable conditions for scalability.⁵

Metaphor analysis in financial texts has received growing scholarly interest over the last decades.⁶ However, it remains insufficiently studied how metaphors enact simulative experiences, mediate representations, and orientate behavior and decision-making employing analogical cognition/modeling. In this regard, four pre-cognitive poetic mechanisms

(namely, metaphor, metonymy, synecdoche, and irony) seem instrumental in the enactment of the “new unconscious” as established by Hassin, Uleman & Bargh. However, these mechanisms have not been sufficiently studied regarding: a) how metaphor especially orientates the creation of symbolic value in crises aftermaths as a way of re-engineering the social fabric; and b) in which ways metaphor enacts symbolic properties and affordances which are pervasively shaping cultural narratives about the economy and policymaking.

Additionally, the recent publication of Caroline Levine’s *Forms* (2015), which advocates for a new formalist method and re-situates literary analysis beyond the Foucauldian notion of discourse, contributed to re-thinking conceptual metaphor theory (CMT).⁷ The revitalization of the study of forms has opened new paths of inquiry. As Levine stated in her work, “We encounter so many forms that even in the most ordinary daily experience, they add up to a complex environment composed of multiple and conflicting modes of organization – forms arranging and containing us, yes, but also competing and colliding and rerouting one another” (16). Levine’s ideas fostered novel perspectives when applied to possible CMT developments. Such new research horizons were reinforced and expanded when Thibodeau et al. empirically demonstrated that there is a significant relationship between metaphor and thought as summarized by the three following pivotal findings:

First, [Thibodeau et al.’s research] identifies a dimension of metaphors that has been underappreciated in previous work on metaphor framing: namely a distinction between metaphors that highlight the dynamic causal structure of complex systems and metaphors that highlight relatively superficial features of systems. ... Second, ... we found that, as predicted, people wrote longer and more intricate descriptions in response to systemic metaphors, that they explicitly rate these metaphors as more systemic, and that they viewed systemic metaphors as more complex in a comparison task. Third, we have found support for the hypothesis that exposing people to systemic metaphors can induce a transferable system thinking mindset. ... Metaphors are simple scalable social and cognitive tools for increasing systems thinking and enhancing decision-making: tools that may help people approach some of the most difficult and complex problems that we face today. (“The Mind” 240)

In this vein, as evidenced by Thibodeau et al., Burgers identifies in parallel that “Metaphors are commonly used in communication, as approximately 16.4% of words in written news ...,” and “metaphors in language typically cluster under larger conceptual structures referred to as ‘conceptual

metaphors.’ ... This implies that metaphors provide frames of thinking about societal topics (e.g., EU) by highlighting particular aspects of the target while obscuring others” (250, 251). Consequently, following an evidence-based approach regarding CMT and Levine’s new formalist approach to literary and cultural phenomena, it can be argued “that metaphorical conceptualization is a process in which the speaker is under two competing pressures: the incarnation of a universal expressive embodiment [what I term in the present study ‘universals’] and that of personal, cultural, and local contextual factors [what I mark as ‘cross-cultural variation’]” (Arrese 21).

Likewise, in a recent study titled “An Extended View of Conceptual Metaphor Theory,” Zoltán Kövecses advocates for what he called “extended CMT,” which connects the cognitive (universals) with contextual components (cross-cultural variation). Besides, Kövecses proposes “four types of contexts: the situation, discourse, bodily, and conceptual-cognitive context. Each one of these comes with a number of empirically established contextual factors” (122). In this regard, Kövecses also suggests that standard CMT “continues to describe offline metaphorical structure at the level of image schemas, domains, and frames in long-term memory” (122).

From my research practice, I understand that Kövecses highlights the very core of both theoretical and empirical challenges currently present in CMT and analogical cognition/modeling. Namely, that “CMT lacks a component that could capture the dynamic process that occurs in the course of actual use of metaphors” (123). Nevertheless, some elegant solutions have been offered. As explained by Kövecses, CMT advocates have put forward the network model, and other related researchers have propositioned remarkable possibilities such as “the notions of scenario, scene, and mental space as the level where metaphors are used [similarly to what Musolff argued in ‘Metaphor Scenarios in Public Discourse’]” (36).⁸ Despite these valuable contributions, scholars such as Musolff note that “further work is needed to specify the categorial relationship between general domain and specific scenario levels as well as to make the latter amenable to rigorous statistical analysis” (36). In other words, there is wide consensus amongst the experts that for standard CMT, the “pragmatic-rhetorical functions of metaphor in natural discourse” remain insufficiently addressed (Kövecses 123). Alternatively, Kövecses suggests a solution to this CMT shortcoming by extending

the schemacity hierarchy to include the level of mental spaces (or scenarios) that function in context. ... I suggest a four-way distinction that includes mental space

level metaphors. The new schematicity hierarchy goes from the most schematic to the least schematic (or most specific) level: to that of mental spaces. Mental space level metaphors assume all the higher level ones in a hierarchy. This way, we can turn [standard] CMT into a theory that can combine the idea of an offline schematicity hierarchy and its online functioning in a unified view of metaphor as both a product and a process. (123-24)

From my perspective, Kövecses's solution is efficient for understanding contextual aspects. Besides, it aligns well with the latest metaphor processing findings, as explained by Paul Thibodeau, Teenie Matlock, and Stephen Flusberg, who demonstrate that "Response time studies have suggested that processing conventional metaphors activates conceptual mappings to the metaphorical source domain [and]... neuroimaging studies have shown that specific sensorimotor regions of the brain ... are activated when people process metaphors related to perception and action" ("The Role" 6). Furthermore, according to these researchers,

Priming studies show that manipulating how people are currently thinking about a source domain (e.g., space) can affect how they reason about a target domain (e.g., time) in a metaphor-congruent fashion, although theories of metaphoric representation should be able to specify and explain why only certain aspects of the source domain (e.g., swamps) are mapped onto the target domain (e.g., DC politics). This would help researchers assess the degree to which people are really *thinking* metaphorically. (Thibodeau et al., "The Role" 8; emphasis added)

In a joint effort to shed light on all the previously mentioned and ongoing challenges present in the study of metaphorical language,⁹ thought, and social engineering, I proposed in 2019,¹⁰ and developed in 2020 and 2022,¹¹ the new notions of "regime of metaphor"¹² and "metaphoricity" integrated within my previous research on cultural narratives.¹³ This lines of inquiry crystallized in the Metaphor Field-Loop Theory (MELT model) as a model of the dynamic process in which the production and use of metaphors occur.¹⁴ For an illustration of the MELT model, see figure 1 below:

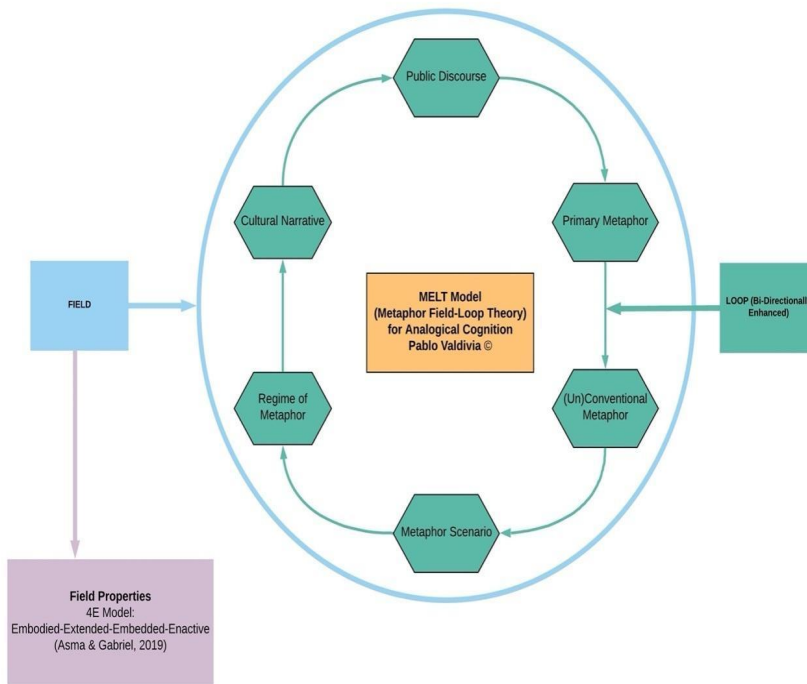


Figure 1. MELT Model © Pablo Valdivia.

In the MELT model, metaphors can be bi-directionally enhanced at the same time that they are capable of operationalization in a field of complex forces interacting in their processing very especially at the cultural narrative level.¹⁵ According to our initial experimental research carried out until today, the MELT model can explain how metaphors, at both long-term and short-term memory functions, display configurations that allow any individual and/or community to manage dynamic and mutable informational systems based on principles of analogical cognition/modeling.¹⁶ Furthermore, as has been stated on separate occasions, empirical evidence seems to point at the regime of metaphor level where the cross-cultural variation of universals collapse into hierarchical symbolic systems that orientate a given cultural narrative (Jansma; Valdivia; Valdivia and Álvarez Osorio).¹⁷ Therefore,

the metaphorical configuration (also known as *metaphoricity*) of a text, in any of its typologies and its mediations, is critical in understanding psycho-emotional activation –both individually and collectively– of a set of possibilities (*affordances*) of interpretation and of worldview orientations which operate under certain conditions (political, historical, social, amongst others). (Valdivia and Álvarez Osorio 286-87; emphasis added).

According to this scheme of ideas, a cultural narrative is the “moral and aesthetic coded symbolic matrix-in-the-making which orientates behavior and signifies the imaginary relationship between an individual (and/or [virtual] community) and her (his/their) material conditions of existence in a given historical-spatial context” (Valdivia, “Narrating Crises” 287). Cultural narratives establish the cognitive and performative grounds of social interactions, attachments, expectations, rationalities, and modes of becoming. They operate as cognitive and performative thresholds while creating meaning and orientating behavior in multidirectional ways (Valdivia, “Cultural Narratives of Crisis” 16). Furthermore, as Stephen Asma and Rami Gabriel explain from a social neuroscience perspective, the *4e Model* (Embodied-Extended-Embedded-Enactive) demonstrates that all meaning processing (especially with regards to narrative forms) is evaluative, simulative, and experiential.⁸ Therefore, analogical cognition/modeling (the processing by which we put in relation elements that appear to be unconnected or distant from each other) constitutes an essential biological mechanism for constructing narratives, critical to all learning in any given communicative situation and informational processing. Consequently, as one of the most complex and abstract mechanisms of analogical cognition/modeling, metaphor is a fundamental element of analysis in this present article focused on the hegemonic cultural narrative and its framing of the 2008 financial crisis and its aftermath.

Here, I assess economic and journalistic public discourses as narrative semiotic and communicative events that activate psycho-emotional states and behavior similar to literary practices. Regardless of whether the central focus is on economic processes or in the storytelling of fictional lives engaging with the 2008 financial crisis and its aftermaths, from my perspective, both economic and literary practices offer high concentrations of non-literal language as means to explain complex developments while they provide simulative and evaluative experiences. In short, more than discussing literature *and* economy, I assess literature *in* the economy, understanding this object of study as the pervasive and strategic

production-use of non-literal language and poetic mechanisms to convey, configure, and articulate *4e* modeled and situated information.¹⁹

RESEARCH DESIGN AND METHODOLOGY

In this study, I follow a research design based on the data collection, via Nexis-Uni, of an original corpus of the most relevant 1000 press articles from two of the most vastly read Spanish newspapers: *El País* and *El Mundo*. The criteria respected for the compilation of this sample were the following: A) chronological (from December 2006 to December 2016);²⁰ B) readership impact (according to the 2006 data from OJD, *El País* published 432,204 copies and *El Mundo* 330,634, signaling both news sources as leaders in Spain far ahead of their competitors);²¹ C) natural language query in Nexis-Uni based on the specific term “crisis financiera”; D) political spectrum relevance: *El País* (Center-Left) and *El Mundo* (Center-Right).²²

The original corpus was retrieved in batches of 300 items and cross-checked by keyword similarity (headlines, authorship, actual paragraph, sentence, and word content) to avoid duplicates. For instance, Nexis-Uni sometimes mistakenly included as different items the same article in terms of content but published under other regional editions. This could potentially distort seriously or lead to errors in my sample analyses. Thus, a meticulous procedure was carried out to ensure the final sample was free of duplicates by running a similarity correlation. After cleaning out duplicates, the final corpus was reduced to a solid sample of 915 items.²³ An extra protocol was implemented to decrease the margin of error, and a Pearson coefficient correlation analysis was completed in NVivo.²⁴ The subsequent result was a correlation of word similarity run on 65,536 cases with a mean value of 0.29. See figure 2 below:

Statistics		
Pearson correlation coefficient		
N	Valid	65536
	Missing	0
Mean		.29169021
Median		.27729400
Mode		.244364^a
a. Multiple modes exist. The smallest value is shown		

Figure 2: Corpus “Crisis Financiera” Pearson Correlation Coefficient © Gonzalo Albornoz and Pablo Valdivia.²⁵

Given, on the one hand, the high complexity and size of the data and, on the other hand, the complex and novel theoretical perspectives developed in this research, I followed a mixed methods approach from a grounded theory perspective.²⁶ Both my research design and methodology have duly respected traceable and reproducible protocols in the collection, exploration, and analysis of data. The main novelties of this research design and methodology are pillared in principles of: a) testability and falsifiability; b) transposability and scalability; c) evidence-based driven qualitative-quantitative analysis. Thanks to this methodological approach, I produced a symbolic value cross-comparison analysis of the press outlets corpus with two literary products. In the following lines, I will offer a detailed account of my research results and a subsequent discussion of the data obtained.

RESULTS AND DISCUSSION

After the sample evidenced no duplicates and was reliable enough to proceed, as demonstrated in figure 2, I coded the term “crisis financiera” by using NVivo’s auto-coding function. First, I analyzed the frequency of the code “crisis financiera” setting a word display of 1000 most frequent with a minimum length value of three and comprising the grouping of exact matches, stemmed words, synonyms, specializations, and generalizations

assisted by the word frequency NVivo search engine. The result produced a very illuminating exploration as it could be reduced to seven most frequent key terms (*financiera*, *situación*, *crisis*, *problemas*, *emergentes*, *histórico*, *dificultad*) as illustrated in table 1 and figure 3:

<i>Word</i>	<i>Count</i>	<i>Weighted Percentage (%)</i>
<i>financiera</i>	3352	34.19
<i>situación</i>	6224	14.88
<i>crisis</i>	5809	13.37
<i>problemas</i>	5480	12.02
<i>emergentes</i>	4860	11.16
<i>histórico</i>	4715	9.66
<i>dificultad</i>	1456	4.72

Table 1: Key Terms by Frequency Search Sample “Crisis Financiera” © Pablo Valdivia.

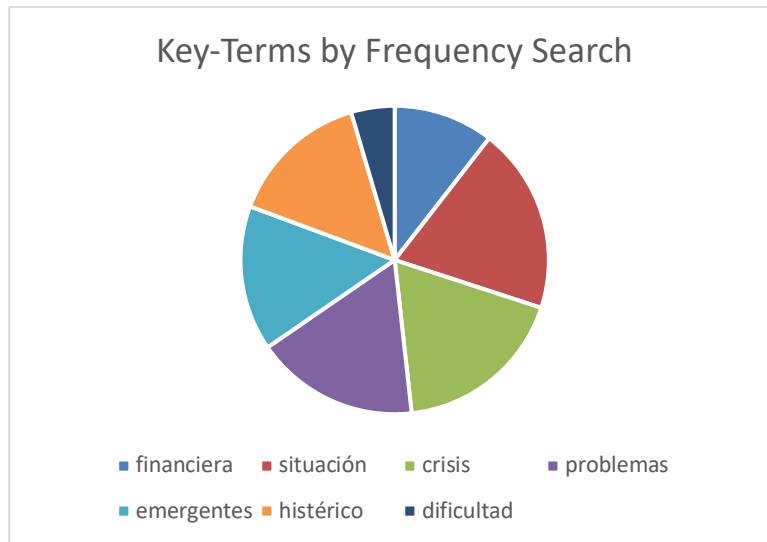


Figure 3: Key Terms by Frequency Search Sample “Crisis Financiera” © Pablo Valdivia.

The data showed a prevalence not only of the words “crisis” (5809) and “financiera” (3352) but also a high frequency of terms that had a strong symbolic capital regarding the affordances of “crisis financiera” in relation to the affordances related to conjuncture/context (“situación”: 6224), emerging as unexpected process suddenly unfolded (“emergentes”: 4860), fear psycho-emotional activation (“histórico”: 4715), troubling and complex dynamics (“problemas”: 5480; and “dificultad”: 1456). Moreover, the weighted percentage evidence the hierarchical centrality of the term “financiera” (34.19%), “situación” (14.88%) and “crisis” (13.37%) in the sample. Consequently, I proceeded to search these key-terms by word similarity in NVivo, which produced the semantic correlation stated in table 2:

Word	Count	Weighted Percentage (%)	Similar Words²⁷
<i>financiera</i>	3352	34.19	finanzas, financie, financieras, financió
<i>situación</i>	6224	14.88	coyuntura, crisis, dificultad, problema, problemas, situaciones
<i>crisis</i>	5809	13.37	ataque, ataques, coyuntura, dificultad, emergencia, problema, situación
<i>problemas</i>	5480	12.02	ataque, crisis, dificulta,

			dificultaban, dificultad, dificultan, dificultando, dificultar, dificultará, dificultosa, problema
<i>emergentes</i>	4860	11.16	crisis, emergencia, emergente
<i>histórico</i>	4715	9.66	ataque, crisis, históricos
<i>dificultad</i>	1456	4.72	dificulta, dificultaban, dificultan, dificultando, dificultar, dificultará, dificultosa, problema, problemas, situación

Table 2: Semantic Correlation of Key Terms Sample “Crisis Financiera” © Pablo Valdivia.

These results indicate that the seven key terms are highly interrelated. Therefore, I proceeded to complete a sample diagram mapping by coding only “crisis financiera” as both terms obtained 47.56% of the weighted total coverage result in combination. The mapping (see figure 4) visualizes the hierarchical semantic network in relation to the weighted coverage coding of “crisis financiera” in the sample. This finding helped me to understand the hierarchical placement of each item of the sample with regards to the field

generated by “crisis financiera” (in the core of the map) in terms of frequency, interrelation, and coverage:

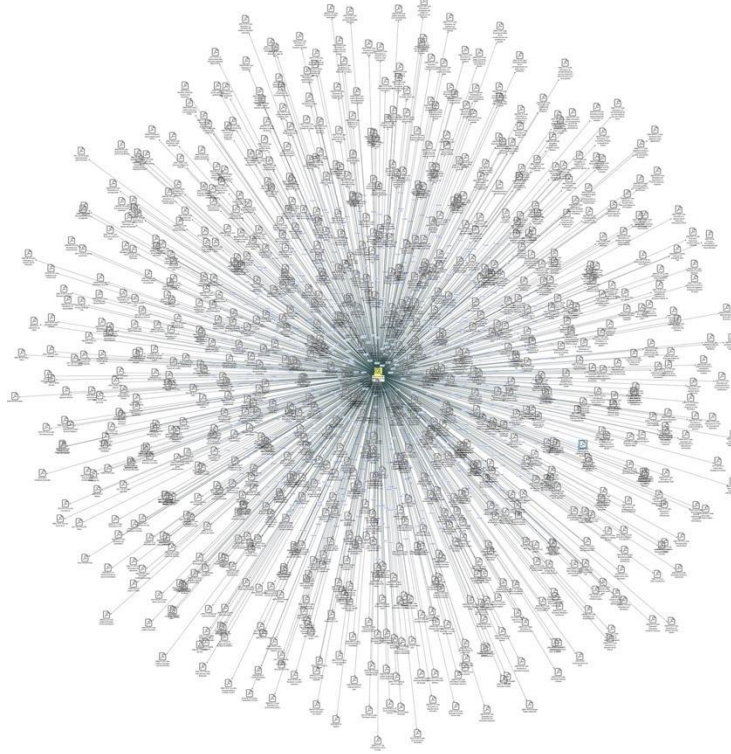


Figure 4: Coded Sample Diagram Hierarchical Mapping “Crisis Financiera”
© Pablo Valdivia.

After completing the delineation of key terms employing frequency, weighted percentage, and words similarity correlation, and also identifying the hierarchical mapping coding of the items contained in the sample with regards to the term “crisis financiera,” I proceeded to explore the results of sentiment analysis of the sample to understand how these texts aligned with the *4e* Asma & Gabriel scheme (as above explained) in terms of psycho-emotional configurations and simulative experience. By applying NVivo’s sentiment analysis functionality, the examination produced noteworthy results. Firstly, both press outlets (*El País* and *El Mundo*) presented a very

similar frame on the impact, management, and repercussions of the 2008 crisis and its aftermath. Most articles expressed moderately negative views (67%) and followed by moderately positive views (23%), far from the most extreme poles, which minimally quantified very negative (7%) and very positive (3%) (see figure 5 below):

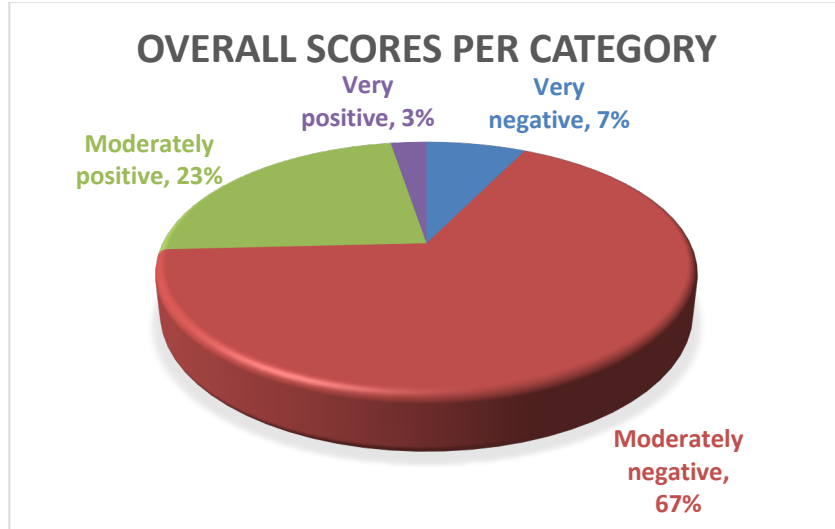


Figure 5: Sentiment Analysis Sample “Crisis Financiera” © Gonzalo Alborno and Pablo Valdivia.

From a diachronic perspective, the data retrieved evidenced very remarkable trends because the negative peak (sum of Moderately Negative and Very Negative) took place in 2014, and the more distance the item had in relation to the triggering events of the years 2007 and 2008, the more the press sentiment activation became negative. This is especially noted in the sentiments from 2016, in which moderately negative and very negative sentiments increase. Their sum (59%+14%=73%) almost tripled the positive sentiments about the 2008 financial crisis and its aftermaths (sum of positive=28%), although the VIX index of 2016-2017 is at its lowest peak since 2006. This finding is almost counter-intuitive. It could have been expected that the closer to the triggering event (2007-2008), the more negative its mediation would have been. Nevertheless, such chronological

distance suggests a possible partial conclusion: the recollection of events by an interpretive community narratively constructs the past by aligning it with the contemporary psycho-emotional activation present at the very moment of the enunciation. In other words, the past is a narrative we collectively and individually forge. The related emotions to the shared past are narratively driven simulations that alter the original (in chronological terms) perception (see figure 6 for visualizing diachronic evolution of sentiments in the sample).

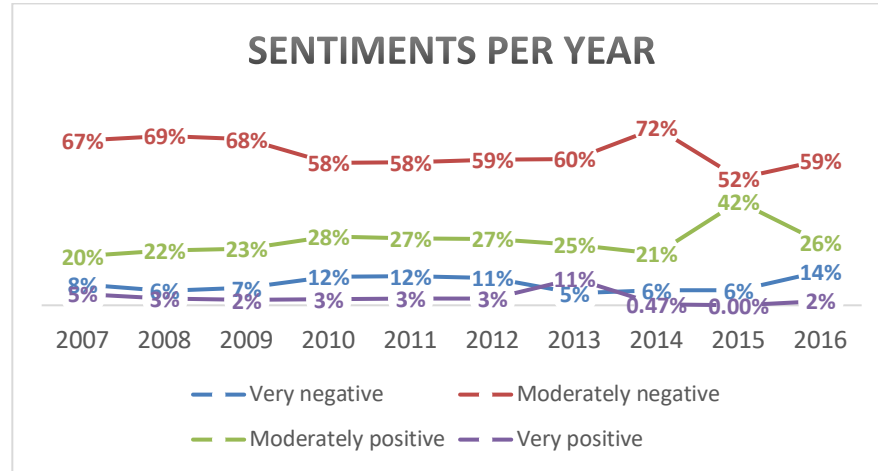


Figure 6: Sentiment Analysis Per Year Sample “Crisis Financiera” © Gonzalo Albornoz and Pablo Valdivia.

At this stage of the research, an additional partial conclusion comprised that the main mechanism for constructing the mediated representation of the 2008 financial crisis and its aftermaths in the sample implied the direct activation of feelings of fear, panic, and rage under analogical cognition/modeling. In other words, the representation of the crisis is not only depicted negatively but is also experienced and embodied by stimulating emotional circuits and orienting behavior in a particular direction. The sample’s topic modeling illustrates this fact well into identified themes. The results of the theme identification using NVivo’s functionality were filtered employing the following criteria. All results below five mentions were dismissed because they were not representative enough, and results above five mentions were double-checked for potential

misidentifications of terms. A total of 209 themes were identified, from which the most salient in terms of hierarchical coding references were topics related to actions, origin relations, spaces, and effects, such as presented in figure 7 “afrontar la crisis” (action), “origen de la crisis” (origin), “sector de la construcción” (spaces), and “efectos de la crisis” (effects). These topics were organizing the architecture of mental representations in the sample (*schematicity* in Kövecses’s terms or *scenarios* according to Musolff’s approach):

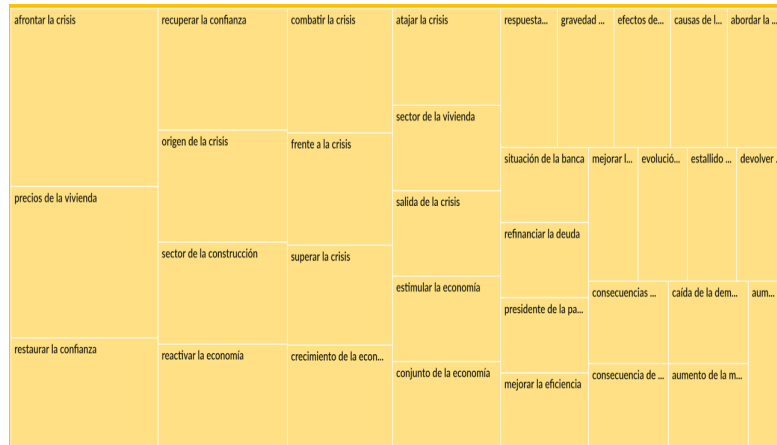


Figure 7: Illustration Hierarchical Visualization Themes Coding Sample “Crisis Financiera” © Pablo Valdivia.

When cross-referenced sentiment and identified theme codes in NVivo together with Arrese’s labels of the conceptual metaphors disease, natural, mechanical, war, sport and entertainment, and organism (27-28), the results demonstrated that there is a direct relation between moderate negative sentiments and the representation of the crisis under the following conceptual metaphor labels: disease (for example, “enfermedad” search with generalizations: 164 references); natural disorder (for example, “tormenta” search with generalizations: 569 references); mechanical (for example, “hundimiento” search with generalizations: 454 references); war (for example, “guerra” search with generalizations: 382 references); sport and entertainment (for example, “jugar” with generalizations: 2978 references); and organism (for example, “rescate” search with

generalizations: 1179 references). These cross-references fully confirmed, at least from my perspective and methodology, Arrese's hypotheses 1 and 2. Namely, the financial crisis was presented as an uncontrollable event, and Arrese's main conceptual metaphor categories were extremely pervasive and uniform regardless of the position of *El País* and *El Mundo* in the perceived political spectrum. However, it remained unexplained how such metaphoricity (the specific metaphorical configuration) activates hegemonic cultural narratives in relation to the 2008 financial crisis and its aftermaths in the Spanish context. In other words, Arrese and this present study prove (although by following different methodological approaches) that a few traditional conceptual metaphors are key in the mediated representation of the 2008 financial crisis. Still, the question that remains open is how they become so effective in orientating the entire psycho-emotional behavior and cultural imaginary of an interpretive community.

In response to this pertinent question, the MELT model can be substantially helpful. It explains complex informational processing from production to use under the *4e* Asma & Gabriel scheme. For instance, and as a concrete scalable and reproducible example, if we take a recurrent primary metaphor in the "Crisis Financiera" sample such as "crisis is a natural disorder" ("crisis es un desorden natural"; 569 references in the sample), it gets conventionalized as "financial storm" ("tormenta financiera") where the "storm" ("tormenta") becomes a metaphor scenario with the potential of being analogically modeled into a wider regime of metaphors, namely: financial crisis is uncontrollable (for example, "que estalló la tormenta financiera"); financial crisis is unaccountable (for example, "ya amainaba la tormenta financiera"); financial crisis is a scene (for example, "escenario de una tormenta financiera"); and financial crisis is in recurrent process (for example, "se repita la tormenta financiera"). Hard evidence of this regime of metaphor can be found in the illustration offered below, where I displayed in NVivo and visualized as word tree the main representative symbolic values of the metaphor "tormenta financiera" within my sample (see figure 8).

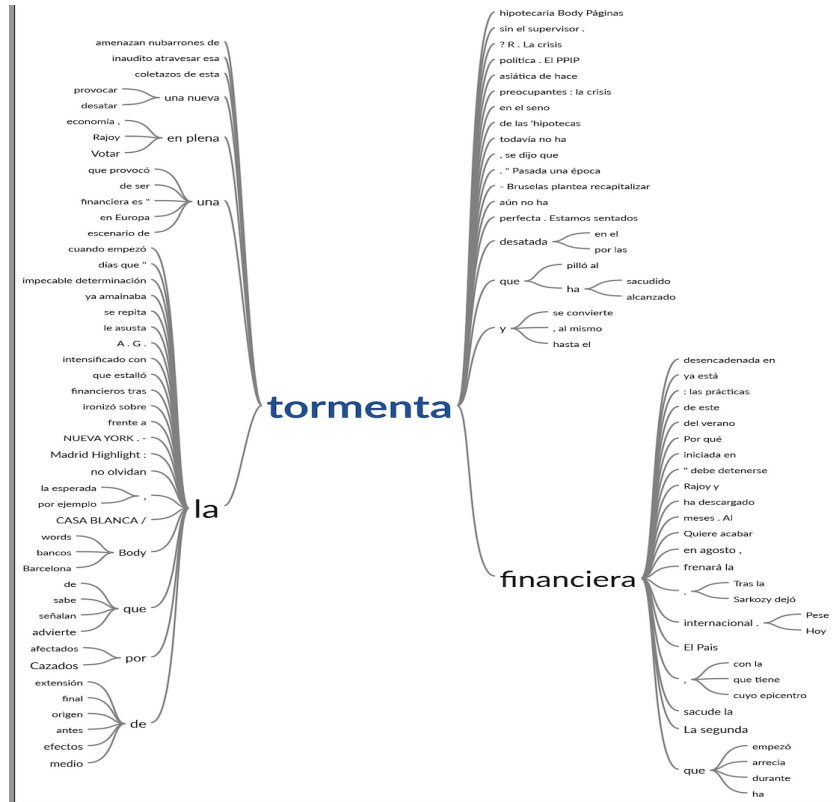


Figure 8: Financial Storm Conceptual Metaphor Word Tree Display Sample “Crisis Financiera” © Pablo Valdivia.

The word tree displayed in figure 8 illustrates how, according to the MELT model, the regime comprises a set of conceptual metaphors related to weather phenomena (for example, “ya amainaba la tormenta financiera”) and mechanical connections (for example, “la tormenta financiera frenará”). This regime is especially efficient at consolidating analogical cognition/modeling because it operates under a field-loop in which the 4e Asma & Gabriel scheme is integrated: “la tormenta financiera” is embodied, extended, embedded, and enacted. Therefore, this regime has a strong metaphoricity configuration based on the simulative experience of “a storm,” producing a relatable experiential narrative. Besides, it is universal and easily adapts to cross-cultural variation degrees, efficiently functioning

at both long- and short-term memory levels. Thus, the regime is operationalized as a cultural narrative thanks to the bi-directional input provided by the privileged regime of metaphor and the reinforced processing from the public discourse level. In the latter, the hegemonic cultural narrative of the 2008 financial crisis and its aftermaths, which functions as a conjuncture of an accountable and unexpected natural disorder, is a political form (as above mentioned by Levine in 2015) at once colliding with and obscuring other cognitive informational dynamics. In this regard, it is plausible to claim that a particular cultural narrative's success is proportional to its metaphoricity's symbolic value, which is produced only under a specific set(s) of a regime of metaphors and no other, as I have previously demonstrated. Otherwise, a primary metaphor, even if shared by an individual and/or community, cannot reach enough symbolic value and cannot be activated into a cultural narrative. In conclusion, according to these empirical results, I argue that CMT (without considering the study of cultural narratives) will find it difficult to accurately assess analogical cognition/modeling processing and how it orientates behavior, world-views, emotions, and social engineering.

At the beginning of this study, I set as my first goal to provide an updated state of the art on the latest developments regarding metaphor and social neuroscience about analogical cognition/modeling and, as the second interrelated goal, that this research aim to analyze how metaphoricity activates hegemonic and pervasive cultural narratives in relation to the 2008 financial crisis and its aftermath in the Spanish context. Both goals have been accomplished by providing a clear overview of the current state of the art and a research design and methodology with substantial examples and empirical evidence.

In *Can We Be Wrong? The Problem of Textual Evidence in a Time of Data* (2020), Andrew Piper provides five steps of model building: definition; selection; annotation; implementation; and validation (18-21). The latest, validation, is key when studying textual evidence, especially when "assessing levels of reader agreement" (33) and establishing predictive models. In my current study, I assessed semantic cross-comparison values with two literary texts which had a relevant impact on the readership from December 2006 to December 2016. It is important to note that I have not measured levels of reader agreement because the goal of this research is not to establish what is the specific interpretation of a given text X but to understand metaphoricity configurations that could, as I will state in the conclusions, inform decision making, policy making, and communicative events. Also, I do not run cross-validation with machine learning to

formulate a predictive model as it falls out of the scope of the present research.²⁸ Having said this, I fully acknowledge that future machine learning-based cross-validation techniques might contribute to expanding our knowledge of conceptual metaphors. Nevertheless, it is not related to the task at hand.

In this study, I performed a symbolic value cross-comparison analysis by means of exploring metaphoricity as done with the sample data “crisis financiera,” but with a different sample comprising the literary essay *Todo lo que era sólido* (2013) by Antonio Muñoz Molina and the novel *En la orilla* (2013) by Rafael Chirbes.²⁹ Consequently, as I argue in “Narrando la crisis financiera y sus repercusiones,” and in “Literature, crisis, and Spanish rural space in the context of the 2008 financial recession,” the 2008 financial crisis was not only a mere economic crisis but a symbolic crisis “cuyas ramificaciones y mecanismos discursivos han desajustado los elementos constitutivos de nuestras sociedades hasta el punto que parecen ‘fuera de sitio’ (disjointed), en el sentido que expuso Derrida en *Espectros de Marx* (Derrida, 1981)” (Valdivia 22). Moreover, literature is a human discourse built on mutable and contingent symbols and simulative experiences.

The criteria followed for this particular choice of texts are twofold qualitative and quantitative: 1) from a qualitative perspective, *Todo lo que era sólido* and *En la orilla* were the object of important public recognition: Muñoz Molina obtained the Prince of Asturias Prize in 2013, and Chirbes obtained the National Narrative Prize in 2014; 2) from a quantitative perspective *Todo lo que era sólido* has received nineteen re-prints of the first edition and *En la orilla* has obtained five editions. Both texts received intense media attention and were considered iconic representative works related to the 2008 financial crisis (Valdivia, “Narrando la crisis”).³⁰

By following the same research design and methodology as with the sample “crisis financiera,” I measured in NVivo the Pearson coefficient by similarity word correlation which resulted in a 0.605 figure. In principle, only results above 0.7 denote a strong or representative correlation. However, a 0.605 result is, in my view, also relevant here and worth noting as it was expected to find dissimilarity but higher than this result attests. Therefore, my interpretation is that the 0.605 coefficient in similarity word correlation is beyond randomness and partially reflects that both Muñoz Molina and Chirbes, beyond obvious style differences, were writing under the same hegemonic cultural narrative and using very similar symbolic values. In other words, they wrote their respective texts from similar conceptual architectures.

The data shows that both texts contain a moderately negative representation of the events, situations, and contexts that comprised them (the 2008 financial crisis and its aftermath). Still, they present very similar relative sentiment values, reinforcing my working hypothesis that Muñoz Molina and Chirbes are writing from a related conceptual architecture. Additionally, these results align well with the sentiment analysis previously performed with the press outlets' sentiment analysis, more concretely, with the sentiment analysis results for the years 2011 to 2014.

Regarding the identification of the themes (as established next step in my research design already applied to the press outlets sample), the hierarchical analysis demonstrates a prevalence of related economic topics and their representation via the press, such as “leer los periódicos” and “páginas de los contratos”; the imposition of a situation out of control “sometimiento a los códigos,” where it the crisis aftermath has created a context of stagnation and lack of employment “repartir los currículos.” See figure 10 below:



Figure 10: Illustration Coded Hierarchical Visualization Themes Sample “*Todo lo que era sólido + En la orilla*” © Pablo Valdivia.

Other identified salient themes are “librar la batalla,” “reino de la economía,” “decir la palabra embargo,” “recibos de la luz,” “letra de la casa,” “productos de la bolsa,” and “funcionamiento de la sociedad,” amongst others. This evidence attests that the engagement with the 2008 financial crisis and its aftermath is not just a part of the *atrezzo* but a key architectural component in the articulation of their symbolic value.

Furthermore, after applying Arrese’s conceptual metaphor labels, the result reinforces the previous line of inquiry. Our findings establish that

both texts contain conceptual metaphors of disease (for example, “enfermedad” search with generalizations: 127 references cross-compared to 164 references in the sample of press outlets); natural disorder (for example, “tormenta” search with generalizations: 316 referenced cross-compared to 569 references in the sample of press outlets); mechanical (for example, “hundimiento” search with generalizations: 101 references cross-compared to 454 references in the sample of press outlets); war (for example, “guerra” search with generalizations: 209 references cross-compared to 382 references in the sample of press outlets); sport and entertainment (for example, “jugar” with generalizations: 1044 references cross-compared to 2978 references in the sample of press outlets); and organism (for example, “rescate” search with generalizations: 303 references cross-compared to 1179 references in the sample of press outlets). See figure 11:

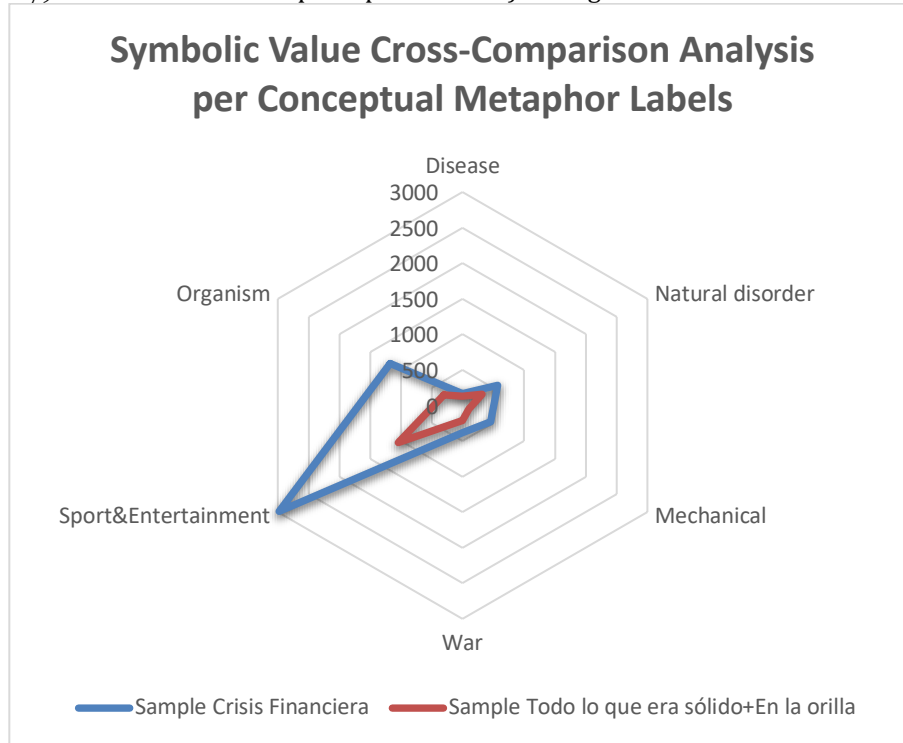


Figure 11: Visualization Symbolic Cross-Comparison Analysis per Conceptual Metaphor Labels © Pablo Valdivia.

These results show estimated relative alignment between the literary texts and the press outlets in at least conceptual metaphors of disease, natural disorder, war, and sport and entertainment. Therefore, this provides further evidence of the fact that Muñoz Molina and Chirbes share important elements of the same conceptual architecture with the press outlets analyzed in this study. Moreover, a search of the term “economía” (including generalizations) resulted in 355 references in *Todo lo que era sólido* and 271 references in *En la orilla*.

However, a closer look at the findings marks a significant difference in the relation of the metaphoricity in the press outlets. The estimated relative lack of alignment regarding mechanical and organism conceptual metaphors indicates that both Muñoz Molina and Chirbes differ from the newspapers concerning the notion of accountability. This deviation is key to the accurate understanding of the contribution that the literary practices of Muñoz Molina and Chirbes brought into the hegemonic cultural narrative of the 2008 financial crisis as an uncontrollable and unaccountable process. While *Todo lo que era sólido* and *En la orilla* match the sentiment and conceptual architecture framed by the press, even if they acknowledge that the information provided by the media strongly shapes their narratives and there is a limited agency for regular citizens in the macroeconomic processes, both Muñoz Molina and Chirbes point towards the direct accountability of the banking regulatory systems and the political class. A search (with generalizations) of the term “control” resulted in 1647 references and similarly occurred with the term “políticos” resulting in 746 references, as well as a combined result of “sistema + dinero” which produced 1186 results. Finally, this argument is further confirmed after completing a search on the combined term “políticos + sistema + dinero” which had a total of 1913 references: 958 for *En la orilla* (0.43% coverage) and 955 for *Todo lo que era sólido* (1.0% coverage).

Therefore, from the scientific lenses of the MELT model, it is possible to attest that these literary texts, departing from similar primary metaphors, conventional metaphors, and metaphor scenarios, activate a regime of metaphors that do not fully comply with the privileged metaphors from the hegemonic cultural narrative of the economy. The difference is based on the divergence in terms of metaphoricity and, thus, symbolic value as demonstrated by the cross-comparison analysis. Instead of using mechanical and organism metaphors, Muñoz Molina and Chirbes privilege meta-cognitive analogical modeling by focusing on the crisis as a process with specific actors, plots, and contexts. In other words, they share the conceptual metaphor of “financial crisis is a narrative.” In short, a structure

with a start, end, meaningful plots incarnated by human actors (although fictional), and interconnected events: namely, History.

CONCLUSIONS

This article begins from the study of two interconnected goals which have been completed. Besides, this research has not only confirmed Arrese's hypotheses on metaphors in economic discourse but also has demonstrated that the "economic discourse" is based on symbolic matrices in the making which attribute value through forms and affordances facilitated and primed by specific conceptual architectures and principles of analogical cognition/modeling. In this vein, the notions of regimes of metaphor, metaphoricity, and cultural narrative prove to be especially productive under the framework of the MELT model, which connects the latest developments in CMT (Kövecses's extended conceptual metaphor theory) and in social neuroscience (Asma and Gabriel's *4e Model*). Moreover, a mixed-methods research design and methodology pillared in principles of grounded theory and qualitative-quantitative data analysis has expanded the state-of-the-art horizon of inquiry.

Antonio Muñoz Molina and Rafael Chirbes thought about the 2008 financial crisis and its aftermath from related, although different critical perspectives. However, they both converged into an assessment that differed from the hegemonic cultural narrative of the economy advocated by the press outlets. Their difference was not in a opposition that was radical and out-of-the-symbolic system but rather in a privileged metacognitive perspective absent in the press outlets. As argued in an earlier stage of this study, I do not find that the binomial relation of literature and economy as two separate discourses or entities is completely accurate. Following Levine's ideas, from my perspective, nothing escapes literary knowledge, and our very deepest unconscious pre-cognitive biological equipment is rooted in fictional poetic principles. Therefore, it could be more pertinent to talk about literature (understood as symbolic mechanisms of informational processing) in the economy. Economists rely on cognitive shortcuts such as metaphor, metonymy, irony, and synecdoche to shape and make sense of very complex abstract dynamics. A timid attempt was recently made by Thomas Piketty in *Capital and Ideology* (2019) in which he used examples of literary works to illustrate some financial developments and their repercussions in the social domain. However, Piketty reproduced the nineteenth century understanding of literary studies as the incarnation of the *Volksgeist* of a community. Such exoticized and dominant misrepresentation of what literary studies are and

how they can contribute to shedding new light on very complex challenges needs to be further contested. This study is a step in that direction in which modern literary studies will collaborate on a multidisciplinary basis with other perspectives to resolve timely difficult tasks. Literary experts can provide very helpful insights to policy-making in the understanding and engineering of how cultural narratives orientate behavior, world-views and decisions. This study's findings have demonstrated that, unlike the hegemonic cultural narrative of the economy, literary practices can be disruptive to envisioning alternative conceptual architectures, which will pay undivided attention to the plural diversity of interpretive communities rather than reinforcing the communicative strategy of non-democratic actors. *Todo lo que era sólido* and *En la orilla* offer conditions for transposable scalability. Future research lines will further test the working hypothesis of this study, its research design, methodology and contribution to the understanding of CMT under the context of new formalist approaches to literature and social change.

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NOTES

- 1 I would like to express my gratitude to Alberto Godioli, Bonifacio Valdivia Milla, Gema Ocaña Noriega, Gonzalo Albornoz, and Clara Ciopata for their comments and insights during the preparation of this article.
- 2 The phrase "2008 financial crisis and its aftermath" refers to the framework robustly problematized by Manuel Castells, Joao Caraça, and Gustavo Cardoso in the volume *Aftermath: The Cultures of the Economic Crisis* (2012), where it is noted as a working definition: "The global financial crisis that exploded toward the end of 2008 and sent the global economy in a tailspin started in the United States, the seedbed of global informational capitalism, which has been the predominant breed of capitalism since the 1980s" (5). I follow here the definition provided in the abovementioned volume which conceptualized that "in the immediate aftermath of the crisis, in the USA and in the European Union, a four-layer economy seems to be emerging: 1. A revamped informational capitalist economy for a much smaller segment of the population ... 2. A public and semi-public sector in crisis, increasingly unable to generate employment and demand as the fiscal crisis deepens ... 3. Survival-oriented, traditional economic activities ... 4. An alternative economy sector ... based on a different set of values about the meaning of life" (11-12). It is important to note that other potential aftermaths to be considered such as the

Indignados Anti-Austerity Movement (2011-2015) fall out of the scope and goals of this study which solely focuses on the conceptual architecture of selected press outlets, literary works and metaphoricality in relation to configurations of psycho-emotional activation. For a thorough study on the impact of the Indignados Anti-Austerity Movement and the context of the democratic structures emerging from the 2008 crisis, see Castells's authoritative analysis in *Ruptura: la crisis de la democracia liberal* (2020).

- 3 According to the promotional information provided by the publishing house Seix Barral, *Todo lo que era sólido* was framed in the public sphere thus: "Este es un ensayo directo y apasionado, una reflexión narrativa y testimonial, al más puro estilo de los ensayos de George Orwell o de Virginia Woolf, una propuesta de acción concreta y entusiasta para avanzar desde el actual deterioro económico, político y social hacia la realidad que queremos construir. Partiendo tanto de documentos periodísticos como de la tradición literaria, Antonio Muñoz Molina escribe esgrimiendo razón y respeto, sin eludir verdades por amargas que estas sean, porque saber es el único camino para cambiar las cosas. Testigo de una época en la que aún no estaban a nuestro alcance derechos que ahora peligran, nos recuerda que nada es para siempre, que cualquier derecho puede desaparecer. Este ensayo nos convoca: 'hace falta una serena rebelión cívica' y nos apremia: 'hay cosas inaplazables'. Todo lo que era sólido es un espejo en el que todos debemos mirarnos, no importa el lugar ideológico en el que nos movamos, dónde vivamos o nuestra condición social; una llamada para que reaccionemos, cada uno desde nuestro ámbito de actuación, y contagiemos con nuestro ejemplo una responsabilidad cívica que hemos de exigir, de manera contundente, a nuestros gobernantes." [\(Seix Barral\)](#)
- 4 According to the information provided by the publishing house, Anagrama, *En la orilla* was framed in the public sphere as "El hallazgo de un cadáver en el pantano de Olba pone en marcha la narración. Su protagonista, Esteban, se ha visto obligado a cerrar la carpintería de la que era dueño, dejando en el paro a los que trabajaban para él. Mientras se encarga de cuidar a su padre, enfermo en fase terminal, Esteban indaga en los motivos de una ruina que asume en su doble papel de víctima y de verdugo, y entre cuyos escombros encontramos los valores que han regido una sociedad, un mundo y un tiempo. El bienestar y su reverso inseparable, la codicia y los falsos proyectos, convertidos en materiales de derribo. El espejo en que se mira la vida de Esteban, a su manera un hombre sin atributos, devuelve una imagen hecha de sueños rotos y de ilusiones perdidas. Nada se ha librado de la voracidad. El amor, la familia, la amistad y los códigos sociales también han formado parte del menú en este banquete de unos pocos. Como es habitual en las novelas de Rafael Chirbes, el

interior de los personajes, lo que éstos piensan y sienten sobre sí mismos y sobre el mundo que habitan, se corresponde con un determinado paisaje exterior que en este caso tiene como referencia ineludible al pantano. Éste, principio y final de la narración, va adquiriendo un creciente peso simbólico que, siempre sujeto a un feroz materialismo, nos ayuda a comprender las complejas relaciones que los seres humanos mantienen con su entorno y con su historia. La novela nos obliga a mirar hacia ese espacio fangoso que siempre estuvo ahí, aunque durante años nadie parecía estar dispuesto a asumirlo, a la vez lugar de uso y abismo donde se han ocultado delitos y se han lavado conciencias privadas y públicas.” (*Anagrama*).

- 5 It is important to note that a complete historical contextualization of the events that occurred in Spain from 2008 to 2016 is not part of the scientific objectives of this study and exceed the limits of this article. For a comprehensive approach to the historical context related to the timeline of press outlets and works presently studied, see Antentas; Besomi, *Crises and Cycles in Economic Dictionaries and Encyclopedias*; Carretero Miramar and Bradd; and Quaglia and Royo.
- 6 For a broad overview, see Besomi, “The Metaphors of Crises.”
- 7 CMT has been the object of criticism due its alleged overly confident in the universality of metaphorical configurations. See Thibodeau, Matlock, and Flusberg, and Kövecses.
- 8 According to Musolff, “Scenarios enable the speakers not only apply source to target concepts but to draw on them to build narrative frames for the conceptualization and assessment of sociopolitical issues and to ‘spin out’ these narratives into emergent discourse traditions that are characteristic of their respective community. The analysis of source scenarios as focal areas of source domains provides a platform to link the conceptual side of metaphor to its usage patterns in socially situated discourse” (36).
- 9 I consciously leave for further research the study of multi-modal metaphor out of this article due to this publication formal constrains.
- 10 See Valdivia, “Narrating crises”: “Analysis of the pervasiveness of metaphoricity in a given cultural narrative is key to understanding the confluences of factors which intervene in the creation of alternative cultural and political imaginaries and, thus, social change. As stated by Gibbs (*Metaphor Wars*), “Conceptual Metaphor Theory is not a complete theory of how language is understood, because conceptual metaphorical knowledge must be complemented by a diversity of other linguistic, cognitive, and social-cultural processes” (286). According to Lakoff and Johnson (“Conceptual Metaphor in Everyday Language”, *Metaphors We Live By*, “The Contemporary Theory of Metaphor”, *Women, Fire and Dangerous Things*, in *Because You Bear*

This Name, 80): 'Our metaphor system is central to our understanding of experience and to the way we act on that understanding'. From my perspective, such 'understanding of experience' is deeply connected to the fictional narrativization of space, time and self-referential expression. We are the fictions we engage with, and which are hierarchically operated under multi-directional and multi-layered forces" (286).

- 11 See Jansma: "If metaphor scenarios process meaning, it is still not clear why some metaphors are more prominent than others. To explain this, Valdivia theorizes the hierarchical notion of regime of metaphor: "a key intermediate cognitive operation where metaphors are narratively enacted, made visible and experienced" ("Narrating" 293). This is illustrated with examples of post-war regimes of metaphor on the European Union, such as EUROPEAN UNION AS A BUILDING, or STATE MEMBERS AS FRIENDS, which are today being challenged by new rising regimes of anti-European metaphors like EUROPEAN UNION AS CORRUPTED BODY and STATE MEMBERS AS RIVALS. As soon as a regime of metaphor gains momentum, it can enact the configuration of the fourth and last cognitive level: the cultural narrative, as defined in section 3.2. Simply put, cultural narratives are the fictions we believe ourselves to be, and in the name of which significant political and societal decisions are taken. Valdivia ("Narrating Crises and Populism in Southern Europe: Regimes of Metaphor") uses the example of Enlightenment Europe, promoting a strong belief in rationality and technological advancement, which largely defines and confirms our conceptualizations of the European Union as a vehicle for progress" (282-301).
- 12 See Valdivia "Cultural Narratives of Crisis": "In light of the ideas produced by Caracciolo, Damasio, Castells, and Pujante, among others, it seems justified to tentatively conclude that a cultural constructivist approach which takes into consideration the enactivist configuration of narrative experiences (narrative level) and the articulation of the rhetorical devices which enable the pre-figurative poetic act of processing information (tropological level) provides us with a new powerful research instrument for the study of cultural narratives. Such an instrument should be at the base of a transposable quali-quantitative model of scientific cultural analysis falsifiable and empirically testable" (104-05).
- 13 See Valdivia "Literature, Crisis, and Spanish Rural Space": "Holmgren has revealed that the neoliberal agenda has put forward a determined set of metaphors around the very notion of financial crisis. Financial neoliberal report metaphors show common patterns such as (a) the state of the economy is likened to the state of health of a person, (b) the economy is a person, and (c) the economy is a flexible object and product of a natural disaster

(Holmgreen 106). Moreover, the neoliberal metaphors have encapsulated the rural in a spectral space barely known, either to artists or political scientists” (166-67).

- 14 See Valdivia “Conflictive Cultural Narratives”: “Regarding the metaphorical configuration of cultural narratives and how they operate in the field of public discourse, our study is sustained by the model also established by Pablo Valdivia on the regime of metaphor and metaphorical production, which attests how analogical modeling is processed and generated in a metaphorical field. In Valdivia’s model, the regime constitutes ‘a key intermediate cognitive operation where metaphors are narratively enacted, made visible and experienced’. (Valdivia 2019, 293) Following the above-proposed model, the metaphorical configuration (also known as metaphoricity) of a text, in any of its typologies and its mediations, is critical in understanding psycho-emotional activation – both individually and collectively – of a set of possibilities (affordances) of interpretation and of worldview orientations which operate under certain conditions (political, historical, social, amongst others)” (57-94)
- 15 For detailed examples, see Valdivia, ““Narrating Crises and Populism,” “Cultural Narratives of Crisis”; and Valdivia and Álvarez Osorio).
- 16 A new research project has been granted by MINCIENCIAS Ref. 906-2021 (started in August 2022) in which Maria Isabel Marin will develop an AI-enabled predictive system to test and to fine tune, in large scale, the MELT model and how it can contribute to the social engineering of our societies.
- 17 See Jansma, Valdivia (2019, 2020), and Valdivia and Álvarez Osorio.
- 18 If contrasted with the above noted Kövecses’s four types of contexts, there are very clear similarities with regards to any analogical cognition/modeling process.
- 19 As explained in the conclusions of this article, the distinction between literature *and* economy and literature *in* economy needs to be object of further study in future research as, due to the constrains of and scope of the present work, such a task overcomes the goals of this inquiry. In this regard, my research presents here a preliminary contribution to multidisciplinary humanities studies and how literary experts can provide very helpful insights to policy-making in the understanding and engineering on how cultural narratives orientate behavior, world-views and decisions. See, for example, Valdivia and Álvarez Osorio.
- 20 It is important to note that such timeframe election is justified by the following principles: 1) according to the US Federal Reserve, in 2006 the subprime mortgage crisis started in US and it reached a “crisis point in 2007 when ... fears about the financial health of other firms led to massive disruptions in the wholesale bank lending market”; 2) in late 2016-early 2017 the VIX index

(source Thomson Reuters Datastream 30 June 2017) had its lowest peak since 2006. The VIX index is the Chicago Board Options Exchange Market Volatility Index. A high VIX index means the global market is in fear and volatility. A low VIX index translates into market confidence and stability. The twentieth of October 2008, the VIX index reached the highest peak in its history: 96.40. This indicator overlaps with the historical fact that in October 2008, USA had to create a new law to bailout its financial system and the UK had to intervene for saving its banking system. Therefore, instead of taking as time point of reference EU summits or actions of the European Central Banks (Arrese), in this research I found it more accurate to set chronological boundaries with respect to the actual key economic indicators which are more reliable and significant than the celebration of political events or announcements.

- 21 According to certified OJD data, *El País* published 432,204 copies, *El Mundo* 330,634, *ABC* 240,225, *La Vanguardia* 220,161, *El Periódico* 167,804, and *La Razón* 142,838. Similarly, *El País.es* had 4.9 million users and *El Mundo* had 4,6 million users (data provided by Nielsen/Net Ratings in *El País*).
- 22 According to a study published by the Pew Research Center in May 2018, *El País* and *El Mundo* are the two most trusted press news outlets in Spain. Moreover, 51% of adults in Spain use *El País* as news outlet at least once a week while 43% of adults use *El Mundo* likewise. Additionally, *El País* left and right users situate this newspaper on the Center-Left ideological/political spectrum; and *El Mundo* left users place this newspaper on the Center but right users in the Center-Right ideological/political spectrum. Nevertheless, in his study, Arrese placed *El Mundo* as a “newspaper in the middle of the ideological spectrum” and left *Expansión* ideologically-wise undefined. In my view, this is a shortcoming of Arrese’s otherwise brilliant study, as the evidence demonstrates that *El Mundo* has a user perception placement in the Center-Right and, what is more important, *Expansión* belonged to *Unidad Editorial* (same group as *El Mundo*) since 2007. Thus, it was to be expected that both *El Mundo* and *Expansión* presented, as Arrese concluded in his research, similar distribution of number of metaphors and similar distribution of categories of conceptual metaphors (26-29).
- 23 Currently, Nexis-Uni has rights over the sample compiled. Therefore, it is not legally possible to make this dataset available at this moment.
- 24 For this research, I used NVivo latest version as of 2021. NVivo is a software especially designed for qualitative and mixed-methods research which is very useful for the analysis of unstructured data.
- 25 I would like to express my acknowledgement and gratitude to my PhD student Gonzalo Albornoz who assisted me in producing some of the data

visualizations, using the last version of SPSS, from NVivo resultant data analyses.

- 26 For a general overview on Grounded Theory, see Chun Tie et al.: “Grounded theory (GT) is a structured, yet flexible methodology. This methodology is appropriate when little is known about a phenomenon; the aim being to produce or construct an explanatory theory that uncovers a process inherent to the substantive area of inquiry. One of the defining characteristics of GT is that it aims to generate theory that is grounded in the data” (1-2).
- 27 A few words were disregarded because they were just stemmed units with no semantic logic. Once again, I would like to emphasize that NVivo’s searches and auto-coding results were always double-checked and reviewed.
- 28 On cross-validation techniques, see Assaf Rabinowicz and Saharon Rosset: “When it comes to prediction, the question of whether there is correlation between the observations from the *training set* and the *prediction set* -the sample that is used for the model’s parameter estimation, and the set of points whose response is predicted based on the trained model, respectively – plays an important role” (718).
- 29 It is important to note that I understand these texts belong to different genres. However, despite differences in genre conventions and styles (one is a literary essay and the other a novel), both texts converge into the highly use of non-literal language which is a common denominator in literary practices.
- 30 For this study, I followed current legal frameworks with regards to copyrights. The digitized copy of *En la orilla* is partially available via Google Books. In the case of *Todo lo que era sólido*, the text was purchased online as e-book. The use made in this study of both texts complies with international regulations and it was solely carried out for research purposes.

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