INTRODUCTION

It is already a long established tradition to assume that predicates —and, more specifically, verbs— should be clustered in the lexicon in terms of their closeness or similarity in meaning, and that some of their semantic features determine their grammatical behaviour. This statement can at least be traced to as far back as the work by Fillmore in 1970.[1] There, Fillmore compared the grammatical behaviour of some verbs of breaking with some verbs of hitting and arrived at the conclusion that differences in the possibilities for argument expression are motivated by differences in meaning. Thus, the following examples illustrate two structures that have been treated as diagnostics for the semantic differences between those two groups of verbs:

(1) (His) hands caught him, untied the rope, rolled him over and *thumped at him* to empty his lungs (5.205\flob_p.txt 7)
(2) *the glass cracked*, brown paint bubbled,... (38.088\flob_k.txt 54)[2]

In the first case, a verb of hitting is followed by a prepositional phrase whose complement designates the entity receiving the impact. This is an example of the conative construction, which is not found with *break* verbs. The second sentence shows an anticausative or inchoative use of a verb of breaking; this kind of structure seems to be blocked by verbs of contact. Since there is in principle no syntactic reason for this disparate behaviour —both *hit* and *break* verbs are subcategorized as transitive predicates— it is necessary to find an explanation elsewhere, and for a vast group of researchers the locus for an explanation is meaning: *break* verbs can appear in inchoative structures because their semantics involves a change of state, a feature absent in the meaning of *hit* verbs; on the other hand, these encode a notion of contact which is what motivates their "conative" behaviour.

Fillmore's seminal paper, together with others from that period, paved the way for a new line of research that has become central in grammatical theory: the need to develop a theory of lexical representation that not only unveils the meaning

of lexical units, but also does it in such a way that it becomes relevant for the rest of the grammar. Such a theory must also establish the mechanisms that will explain the 'transition' from lexical semantics to grammatical structures; this has been generally —though not exclusively—termed "linking" or "lexis-grammar interface." The design of such a semantics-syntax linking algorithm is heavily dependent upon a number of factors,[3] among which the following two occupy a central place:

> (a) the amount and type of information encoded in a predicate's lexical representation; and
> (b) the amount and type of information that is attributed to grammatical structures/constructions.

Thus, if constructions are understood merely as the arrangement of grammatical structures (e.g. a sequence of phrasal constituents that can be functionally characterized or otherwise), the load of semantic description is put solely on the representation of lexical units. Lexical representation will be centrally —in some cases even exclusively— based on semantic notions that will be projected onto the grammatical component.

If, on the other hand, one accepts that constructions are not mere configurational arrangements but full linguistic signs —and as such constitute form-meaning pairings, they must have their own space in the overall organization of the grammar and should indeed play a fundamental role in explaining what Levin and Rappaport Hovav term "multiple argument realization." The verb *smash* in the following examples is an instance of this:

> (a) [...] high in the chest, smashed him back and downwards while Grundy's shot. (lob_l.txt9) [caused motion construction, "move by hitting"]
> (b) To secure such an end men like Will Dowsing undertook to smash several churches at a time. (lob_d.txt26) [transitive, "'destroy' verb"]
> (c) The police smashed their way into eleven homes (Cobuild 1373) [way construction, "create path & move by hitting"]
> (d) [...] by dashing her mug to the floor, smashing it to pieces. (lob_g.txt36) ([resultative, "bring to a specific result by breaking"]
> (e) Ricky hauled him to his feet and smashed him against the wall (flob_r.txt94) [transitive locative, "contact by impact"]

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[1] Charles J. FILLMORE, "The Grammar of *hitting* and *breaking*," *Readings in English Transformational Grammar*, ed. Roderick Jacobs and Peter S. Rosenbaum (Waltham: Ginn, 1970) 120-133.

[2] The examples used in this introduction have been extracted from the LOB and the FLOB corpus (compiled in Knut HOFLAND, Anne LINDEBJERG and Jørn THUNESTVEDT, eds. *ICAME Collection of English Language Corpora*, CD-ROM, (University of Bergen, Norway: The HIT Centre, 1999). Each of these examples is followed by a code giving a reference to its location within the corresponding text.

[3] For an excellent and extensive study of such conditioning factors see Beth LEVIN, and Malka RAPPAPORT HOVAV, *Argument Realization: Research Surveys in Linguistics Series* (Cambridge: Cambridge UP, 2005).

(f) The nine-millimetre bullets smashed the chain as if it had been plastic (lob_l.txt9) [instrument as subject construction]
(g) With his long-range artillery he aimed to smash the glitter of Western plutocracy (flob_g.txt16) [instrument-oblique]
(h) A plate dropped from his fingers and smashed on the kitchen floor (Cobuild 1373) [conative, "attempted contact by hitting"]

Thus constructions would integrate a number of constraints into their semantic description to mediate in the fusion of a lexical unit.

While some effort has been made to describe this process of integration, published studies are both few in number and limited in scope. The precise mechanisms that act in the integration of a predicate into a construction are yet to be fully described. Several of the papers in this volume are devoted to ascertaining such mechanisms with regard to some of the more vexing constructions in English and other languages like Spanish. Thus, in "From Symmetric to Non-inheriting Resultatives: On Gradience and Conceptual Links in Resultative Constructions," Broccias looks closely to the relations that hold between the arguments of a verb and the English resultative construction. His paper opens by questioning Iwata's twofold typology of resultatives, from which Broccias concludes two of the most relevant claims highlighted in his work. First, that the relation between a verb's arguments and the resultative construction is a matter of degree; second, that this relation is better captured by considering the resultative construction in terms of a causal event sequence. In support of these claims, he presents evidence drawn from the analysis of illustrative key examples that invalidates argument obligatoriness as a reliable criterion and calls into question Levin and Rappaport Hovav's treatment of (im)possible resultative constructions as well as Goldberg and Jackendoff's Full Argument Realization principle and "past tense test." On the basis of this evidence and drawing on some of his previous work, the author proposes to consider resultatives as part of a cognitively motivated gradience, from symmetric to non-inheriting, which is regulated by tight conceptual links (i.e. identity and entailment links) between the causing and the caused subevents.

One of the central issues raised by Gonzálvez-García in his paper "Towards a Constructionist, Usage-based Reappraisal of Interpersonal Manipulation: Evidence from Secondary Predication in English and Spanish" concerns the crucial role of Goldberg's constructions in both lexical description and interpretation. The analysis presented throughout centers around a detailed corpus-based contrastive study of the semantico-pragmatic features associated to secondary predication involving verbs of causation, volition, wish and preference in English and Spanish. Specifically, the author lays emphasis on the fact that a purely semantic and/or structural account based on object-related obligatoriness proves insufficient to account for the overt acceptability differences in the predicative realization of these verbs. This is particularly evidenced by the fact that these differences, as the author demonstrates, are heavily determined by psychophysical and socio-cultural factors. In order to ascertain the role of such factors, the author adopts the Goldbergian constructionist approach and incorporates the notions of "interpersonal subjectiv-

ity" (i.e. the enactment of speaker's position with regard to content) and of force dynamics (Talmy). He concludes that the subjective-transitive construction constitutes a "family" comprising at least four sub-constructions which emerge from differences in how the lexical semantics of the matrix verb is modulated with respect to constructional meaning.

Other contributions in this monograph deal with the issues mentioned above, i.e., the nature of lexical and constructional meanings and the way both interact in the representation of a grammatical structure, from several perspectives. Christopher S. Butler's paper "Formulaic Sequences in Functional and Cognitive Linguistics" is inspired by an attempt to reconcile two approaches to linguistic structure, namely one in which lexical items are judged to fit individual slots in syntactic frames, and another in which language is conceived primarily as a set of recurrent, reusable multi-word lexical items or "chunks." He begins by considering the importance of evidence provided by corpus linguistics (particularly the work of Sinclair and his colleagues) and of psycholinguistic and sociolinguistic studies (like Wray's work) in showing the pervading role of prefabricated units in both language production and language processing, a fact that communication-oriented approaches should be, if they are not, concerned with. After presenting three specific formulaic sequences (*come a cropper*, *bare hands* and *naked eye*) as instances that show varying degrees of fixedness in terms of collocation as well as specific effects on semantic prosody, he goes on to consider the extent to which this kind of multi-word structures is properly accounted for within four functional and cognitive linguistic frameworks: the constructionist approach, the collostructional approach, the parallel architecture model developed by Jackendoff and Systemic Functional Grammar. He concludes that none of these frameworks succeeds in providing a satisfactory explanation for idiomatic language phenomena which go beyond the level of constituent structure, as is the case of semantic prosody. He thus proceeds to propose a novel approach which expands the interpretation of formulaic expressions beyond the constituency level by incorporating the concept of "syntagmatic association." Associations are specifically characterized by their ability to operate at different levels: they may function between specific words (e.g. collocations) or at a more general level within a semantic or syntactic class of items (e.g. semantic prosodies).

Hans Boas' paper "Towards a Frame-constructional Approach to Verb Classification" focuses on the claim that an inventory of verb classes can be more appropriately designed by conflating insights from both semantic and grammatical approaches. In the first part of this paper, Boas weighs up the pros and cons of some well-entrenched perspectives in lexical semantics. In doing so, he shows that, within the event-structure model developed by Rappaport Hovav and Levin, constraints like *Template Augmentation* and the *Argument-per-subevent-condition* seem inappropriate insofar as they allow unacceptable mappings from event structure to syntax. Furthermore, Levin's taking syntactic alternation as the basic criterion for verb classification disregards, as Baker and Ruppenhofer demonstrate, the crucial role of fine-grained semantic descriptions in determining verb class membership. As for FrameNet, which does rely more on semantic criteria, it overlooks the fact that semantic differences have an impact on syntactic realization. After discussing in

detail the differences and similarities in meaning between verbs in the Self_motion frame, Boas propounds an alternative 'frame-constructional' approach that integrates important aspects of componential analysis and verb descriptivity into Frame Semantics.

Within the broader context of a functional and cognitive paradigm, Mairal and Ruiz de Mendoza's "New Challenges for Lexical Representation within the Lexical-Constructional Model (LCM)" offers a model which seeks to refine lexical representations in an attempt to show their potentialities within the field of natural language ontologies and artificial intelligence. Starting from the notion of lexical template, originally a development of Role and Reference Grammar's logical structures, these authors present a step-by-step argumentation of why and how these templates have been subject to subsequent refinement and enrichment as to incorporate the pragmatic and semantic properties of predicates in terms of a universal abstract semantic metalanguage. From this they proceed to reformulate lexical templates by integrating basic features of Pustejovsky's generative lexicon, particularly *Qualia Theory*, thus following the recent proposal in Mairal and Cortés [forthcoming]. In order to illustrate the benefits of this new proposal they provide detailed representations for the lexical classes of change of state verbs, contact-by-impact verbs, consumption verbs and cognition verbs. Cortés and Sosa's paper, entitled "The Morphology-semantics Interface in Word-formation" also subscribes to the LCM's research program and seeks to explore the potential of LCM lexical representations in the domain of word-formation. This has involved integrating Lieber's co-indexation and Pustejovsky's generative mechanisms (*qualia* specification, subtyping and co-composition) as the fundamental tools to account for the integration of the semantic structures of the components of a complex (derived or compound) word.

The papers that form the monograph section of this volume provide a neat image of one of the most tantalizing quests in grammatical theory nowadays, as is the analysis of the interaction between semantics and syntax in sentence production, within the framework of a functionally and/or cognitively-based conception of language. We wish to thank all the contributors for their valuable participation in this volume.