# Harvesting from One's Own Field: A Study in Collocational Resonance

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#### **Abstract**

This paper presents an initial study in the collocational resonance of three words: *field*, *champ*, and *campo*. *Field* and *champ/campo* do not share the same etymology, yet *field* displays sense extension that in some cases is parallel to that displayed by *champ* and *campo*. Collocational resonance posits that meaning associated with one context of use may be activated by speakers in another context, even though the original meaning context may fall into disuse in the language. To determine collocational resonance, the study considers both the historical development of senses as represented in dictionaries and the current behaviour of these words as represented in dictionaries and corpora. It is suggested that an approach to word meaning including prototypes and resonance can improve the representation of polysemy in dictionaries.

**Keywords:** collocational resonance; polysemy, metaphor

## 1 Introduction

Both homonymy and polysemy have long posed problems for lexicography. Whilst the former can be relatively easily handled from a synchronic perspective, this is not so in diachrony. Thus, a historical dictionary may well have to lump senses together in a single entry when a dictionary of the contemporary language would split them into different entries, as historically, what is now justifiably analysed as a homonym, might well be a polyseme. Even in dictionaries of contemporary language, however, the representation of polysemy is problematic, as the requirement for discrete senses denies the obvious continuum between senses. Obviously, these issues are rendered even more complex as language moves from a so-called literal sense to a figurative one through metaphor. In such movements, to adopt the terminology of Hanks (2013), the exploitation of the norm becomes the norm itself, which will, in turn, inevitably be exploited. Four issues thus require a tool for their joint management: etymology, homonymy, polysemy and metaphor.

Hanks (2000) has already proposed a solution to polysemy by proposing lexicographical prototypes, a series of simple propositions that are activated in each individual sense. Hanks (2005) also proposed a means of handling metaphor by proposing collocational resonance. At the same event, Williams (2008) independently also proposed collocational resonance, albeit approaching the data from a more

inter-textual angle. Both researchers are heavily influenced by John Sinclair, so it is it not altogether surprising that, working independently, they should reach very similar conclusions and a selfsame term. Since these landmark presentations, work has gone on to combine lexicographical prototypes and collocational resonance in order to handle the variation of meaning potentials (Hanks 2013) across time and between languages (Williams 2012).

In this paper, we shall look at the word *field* and its equivalents in French, *champ*, and Spanish, *campo* as the beginnings of a longer study into the norms and exploitations of the agricultural metaphor in contemporary use and at the treatment of these words in dictionaries. In this study, we shall concentrate on the dictionary definitions that provide the initial prototype and the current usages of the word as found in corpora.

## 2 Collocational Resonance

The idea behind collocational resonance is that over time words have been attributed different meanings in different contexts. We define meaning as referring to a particular usage that can be defined through a series of propositions that in a stable generalised form provide what can be recognized as a dictionary sense. Meanings are created within a given textual environment within a given context of culture. Thus, meaning elements are shared within a society, with general agreement as to broad senses. As society and contexts of culture evolve, so do the meaning potentials of words. There can be a slight contextual variation, or a more radical one as an exploitation becomes a norm.

Collocational resonance posits that although the earlier senses attributed to a word may be lost, we live in a world of cumulated knowledge so that some meaning attributes may subsist, consciously or unconsciously, thereby colouring a user's use of a word. When there is a deliberate exploitation, for example through active metaphor, the user is quite conscious of the exploitation being made of meaning attributes, and the reader or hearer is expected to share this explicit knowledge. Collocational resonance eschews any so-called cognitive knowledge and posits that while a dead metaphor is simply dead, the knowledge of earlier usage may be found in the unconscious as this knowledge comes from an encounter with the word in a different meaning context, either in a text, a dictionary or through the educational process. The unconscious aspect of meaning attribute carry-over has been demonstrated by Williams (2012) in the case of biologists using rather Lamarkian terms when referring to neo-Darwinian concepts. This variation need not be diachronic; resonance can equally well show variations between general and specialised usage of language.

The aim of studies in collocational resonance, then, is to make meaning variation explicit over time or area of expertise and to show what meaning attributes may remain active. This has been shown for certain verbs used in the sciences, such as *probe*, and also for more general words such as *culture*. The word culture is an interesting case from a cross-linguistic perspective, as it has a common root in all Romance languages and has developed through metaphor in a similar way in all of them. Neverthe-

less, the earlier, literal meaning of *culture* ('the cultivation of soil; tillage'¹) has remained active in some languages, but has virtually disappeared from the use of *culture* in English, although it is clearly present in the use of the derived word *agriculture*. Collocational resonance can be traced using lexicographical prototypes built using a mixture of sources such historical dictionaries as the *Oxford English Dictionary*, earlier dictionaries as the *Vocabolario* of the Accademia della Crusca, 17<sup>th</sup> century French dictionaries, 17<sup>th</sup> century Spanish dictionaries, the Spanish Royal Academy's many editions of the *Diccionario de la lengua castellana* (which would become the *Diccionario de la lengua española* starting with the 1925 edition) and diachronic corpora, when available. Collocational resonance may be demonstrated by showing variations in the collocational networks of lexical items: as the meanings of a word change, so do the collocational patterns associated with the word in question.

When prototypes are used to show variation of meaning potentials over time, contexts or languages, there is no privilege interlanguage acting as a translation hub. The prototypes are there to show meaning potentials and can be started in any language, the aim being to find translatable comparable units in other languages to see what potentials are activated. If here we are starting with the English, it is only because of the excellence of the *Oxford English Dictionary* as a starting point for looking at earlier usage. For French, we have used the *Trésor de la Langue Française informatisé* and the *Dictionnaire Historique de la Langue Française* from Le Robert and for Spanish the Spanish Royal Academy's *Nuevo tesoro lexicográfico de la lengua española*. In this study, we look at words with no etymological relation at all, *field* and *campo/champ*, but which are generally accepted as translation equivalents. In all cases, current usage is analysed making use of the Sketch Engine® tenten series of WaC corpora.

# 3 Field: From ploughing the soil to ploughing through data

Whether it be through culture or through units of land, agricultural metaphors are rife in that our modern urbanised societies could not exist without the organised production of food. The interest of the words under study lies in their totally different etymological origins, which signifies a potentially major difference in resonance. The etymology of *field* is unclear, but by the early Middle Ages it has taken on the notion of open land rather than woodland. In the Romance languages, it is easier to trace back to a Latin source that distinguishes plain and mountain. By the time of the *Vocabolario*, *campo* as being an agricultural area in which seeds are sown, but also a wide variety of other senses, including that of battlefield. Moving forward to the *Dictionnaire Universel* of Antoine Furetière (1690), *champ* has as it first sense an area of ploughed land. Thus, both Italian and French sources confirm an agricultural meaning of cultivated land as opposed to pasture land. Neither has any clear boundaries. Furetière also gives a large number of non-agricultural terminological uses, from heraldry to comb making.

<sup>1</sup> Paraphrase of sense I.1.a. of culture in the Oxford English Dictionary and also sense 4 of culture in The American Heritage Dictionary of the English Language.

In Spanish, the situation is somewhat different. Covarrubias (1611) lists the idea of flat land capable of being cultivated or an enclosed area used for farm animals as the first sense of campo. The entry for campo in the Diccionario de autoridades (1729, for letter C) is quite long, comprising several subsenses for the word in addition to several lexicalised phrases (such as campo de batalla 'battlefield' or hombre de campo 'man who works in fields'). The first sense defines campo as a wide, open plain that is outside a populated area; the notion of lying outside a populated area is quite prevalent throughout the twenty-two editions of the Spanish Royal Academy's dictionary and is still present in the first sense given for the word in the current dictionary ("Terreno extenso fuera de poblado" 'Large piece of land outside a populated area') .The second sense of campo in the Diccionario de autoridades is described as metaphorical and defines campo as the space or period including the whole of something, and the third sense of campo includes the idea of cultivated area (thus, the examples están buenos los campos 'the fields are fine', los campos están perdidos 'the fields are lost', and buen año para los campos 'good year for the fields'. Those three senses would be maintained with little variation as the first three senses listed until the Academy's dictionary of 1837, in which the idea of plain as opposed to mountain is listed as the second sense. Other subsenses listed in the Diccionario de autoridades for campo refer to campo as an army, campo used in textiles and in heraldry, and campo as the location chosen for a duel.

What emerges from this brief historical examination of data from three languages is that a wide variety of senses from two root etymologies have arisen and have merged in certain areas over time. Thus, *field*, *champ* and *campo* as agricultural units of land provide a common starting place for an exploration that will lead to areas of scientific endeavour, fields of study.

An initial prototype is drawn starting from dictionaries, notably the Oxford English Dictionary, Trésor de la Langue Française informatisé and early editions of the *Diccionario de la lengua española* (see Table 1) and consists of extracts from the initial entries for *field*, *champ*, and *campo*. As Table 1 shows, there is no direct correspondence across entries: in English and French, the idea of a piece of land that is delimited arises early on, whereas in Spanish the idea that the land lies outside of, and thus contrasts with, a populated settlement is important.

English	French	Spanish
a piece of ground	espace d'une certaine étendue	terreno extenso fuera de poblado
open land as opposed to woodland		en contraposición a sierra o monte, <i>campiña</i>
land or a piece of land appropriated to pasture or tillage	étendue plate de terre arable	tierra laborable
usually parted off by hedges, fences, boundary stones, etc.	plus ou moins nettement délimité	
	étendue plate de terre arable caractérisée par l'absence de clôture	
		sembrados, árboles y demás cultivos.

Table 1. Some prototypes for field, champ, and campo.

#### 3.1 Field

Collocational networks have been drawn up for the first 5 occurrences in each category of four areas of Sketch Engine® output: 'object\_of,' 'subject\_of,' 'modifier' and 'modified.' An initial sweep of the object collocates brings forth four large meaning classes: [agriculture], [disciplines], [opportunities], and [sport]. Widening to the three other areas provided by the Sketch Engine® data, we can add [computing and mathematics], [physics], [in vivo situations] and [rural].² This done, it is now possible to see what aspects of the prototypes are activated in each case. In the text that follows, the concept areas are square bracketed and the collocates are in italics.

Unsurprisingly, the agricultural and rural senses are closely linked as these are the oldest recorded senses. Both are areas: more specifically, enclosed areas of unwooded ground. The delimitation of the agricultural *field* may be explicit or implicit, as we are hindered by our limited view of clearances, commons and enclosures as acts of creating and appropriating open spaces. The important aspects underlined are tillage, *ploughing* and *sowing*, and food production, which includes *grazing*, although the latter does not require enclosure. This area is relatively level so as to permit tillage. [Rural] is similarly areas of land, and it is opposed to urban areas, which they *surround*. It is possible that woodlands are included, as this is simply an area found in proximity to another area, *villages*, or *towns*. What we term [in vivo situations] are partially related to these, such as the notion of *field trial*, as opposed to laboratory testing, which implies getting out of an enclosed environment into an open space, which when linked to farming is a field as a place for food production. The notion of getting out into the open also comes with *field trip* and *field recording*. The exploitation of the prototype is thus an area, which is delimited, used for agricultural production, is not woodland, lies outside of an urban area, and is a closed space. [Sport] makes use of this as well, but further limits the area. Note, however, the salience of the parameters of outdoors, level and treeless in [sport].

Agricultural metaphors as *cultivate* [the mind] and *culture* [the arts] are frequent. It could be considered surprising thus that *fields of study* largely pre-date the metaphor of *culture*. What is carried over is the notion of a defined area, but a more dynamic one than in agriculture as new *fields* can *emerge*, and as enclosed spaces, they can be *entered*. What is emerging implies new [opportunities] that can be *wide* or *narrow*. Taking the metaphor of delimited area further, we can find the notions defined in [physics] such as electromagnetism, which also hark back to the more or less delimited area as there are no clear barriers here, unlike in computing, where a *field* in a database is limited and needs to be filled in, and is possibly like a *playing field* in that it is rectangular.

Although the Sketch Engine® is an extremely powerful and useful tool, the data provided in a Word Sketch must be carefully analysed and, in some cases, checked against the examples in because sometimes the results can be misleading. Errors in tagging can occur; for example, in the Word Sketch for campo under the category 'subject of,' the proper noun mauthausen is given as the verb with the highest MI index of 6.72. Other proper nouns, such as Valderrama, Covadonga, and Huelva, also erroneously appear in the 'subject of' column, so presumably the grammar used for the analysis needs to be revised. Past participles are considered verb forms, but in many contexts are used as adjectives and as such the results in the column 'sujet de' for the French corpus includes constructions in which the word champ is not a subject (for example, expressions like un champ cultivé or les champs fleuris). Nevertheless, we have found this tool to be useful for providing a quick, overall picture of a word's behaviour.

What the above shows is the subtle linkage of concept areas that in dictionary terms would be called senses. Rather than simply describing them, the prototype approach can be used to show linkage between senses through what is being activated. It also allows us to map change across time and between languages.

## 3.2 A champ is and is not a field

As was done for *field* and *champ*, collocational networks have been drawn up for the first 5 occurrences in each category of four areas of Sketch Engine® output: 'object\_of,' 'subject\_of,' 'modifier' and 'modified.' Although [agriculture] and [disciplines] are common object collocates with *champ*, the notion of extending something (which inherently must have a limit) is very salient in the 'object of' output (the verb *élargir* 'broaden', for example, shows a Mutual Information (MI) index of 9.3 and *étendre* 'extend', an MI index of 6.87, in the French tenten corpus). The salience of the notions of 'used for agricultural production,' especially of crops, and 'treeless' is clear, as *champ* often occurs in a context in which *fôret* and *pâturage* are also listed and contrast with the idea evoked by *champ*.

The concept area with the highest MI index for 'champ + modifier' is [physics], with magnétic and electromagnetic displaying both high frequency and high MI indices. Perhaps surprisingly, the concept area of [language] is salient in the French corpus data: we have champ lexique (MI index, 9.07) and champ semantique (MI index, 7.7). The extension of the agricultural metaphor in present in French but has taken a somewhat different direction from that in English; for example, the verb cultiver, which is a very strong collocate for champ, prefers crops and plants as a direct object, although one can also cultiver le paradoxe, cultiver l'ambigüité, and cultiver la nostalgie (none of which are typically cultivated in English, according to the corpus data).

## 3.3 A campo is and is not a field

As was done for *field* and *champ*, collocational networks have been drawn up for the first 5 occurrences in each category of four areas of Sketch Engine® output: 'object\_of,' 'subject\_of,' 'modifier' and 'modified.' Although [agriculture] and [disciplines] are common object collocates with *campo*, as in English, [computing] is very salient in the 'object of' output (the verb *rellenar* 'fill in', for example, shows an MI index of 9.27 in the European Spanish tenten corpus). Interestingly, the notion of [enclosure] , which is not included in the dictionary definitions for the several senses of *campo*, does seem to underlie some usage in contemporary Spanish, as the verb *delimitar* 'delimit' shows a reasonably high MI index for 'object of' (6.66). The area of [confinement of people], to which the underlying notion of enclosure is inherent, is also very salient for *campo*: we find *deportar* 'deport' ('subject of'); *concentración* 'concentration,' *exterminio* 'extermination,' and *refugiado* 'refugee' (n\_modifier). Of course, that subject area in English is not associated with *field* but rather with the etymological cognate of *campo*, *camp*.

The notion of getting out into the open, which gives rise to much phraseology and several lexicalized expressions in English (e.g. field trip, field work), is important to the collocational network for campo mainly in conjunction with the nouns trabajo 'work', experimento 'experiment' and estudio 'study'; this notion is much less salient in the network for campo than it is in the network for field.

An important difference between the behaviour of *field* and *campo* is related to the area [military]: one can *invadir* 'invade' *campos* and be the *mariscal de campo* ('field marshall') on a *campo de batalla* ('battle-field'; MI index of 9.54). The fact that English *battlefield* is a morphological compound surely explains the fact that this subject area is not as salient for *field* as it is for *campo*.

In English, the verb *cultivate* is a common collocate of *field*, and similarly in Spanish, *cultivar* is a common collocate of *campo*. The agricultural metaphor appears to have been extended further in English, however, as *cultivate* often takes abstract nouns as a direct object (*mindfulness*, *friendship*, *relationship*, *virtue*), whereas the corpus data show that Spanish *cultivar* overwhelmingly takes crops and plants as its direct object. In fact, the Word Sketch only lists one direct object in 25 that is not literally related to agriculture and that word is *amistad* 'friendship.'

In Spanish, the concept area [sport] is present mainly because of *campo* is used to refer to golf courses (Spanish, *campo de golf*) and football fields (*campo de fútbol*), which can be stepped on (*pisar el campo*) once it has been opened and inaugurated (*abrir/inaugurar el campo*). This concept area, however, appears to play a smaller role in Spanish than it does in English.

Interestingly, the prototype of *campo* as being located away from a populated centre is still prominent in Spanish. Under the category of 'and\_or', and discarding proper nouns which produce errors, the two nouns that are in some sense complementary to *campo* are *bosque* 'forest' (MI index of 6.09) and *montaña* 'mountain' (5.85). Using the Sketch Engine to consult a different corpus (the Spanish web corpus), the noun that appears with the highest MI index in this category is *ciudad* 'city,' which clearly evokes the contrast with *campo*.

# 4 Dictionary representation of collocational resonance

Collocational resonance, as stated earlier, claims that meaning attributes can be carried over from one context to another. As such, it can, and we believe, should, be taken into account in dictionary representation because it can help to show that there is a relationship between senses that are depicted as discrete items on a list. Such listing practice, of course, may be unavoidable in dictionary representation, but as Fillmore (1975) and Hanks (2000; 2013) have argued, is not necessarily a proper approach to word meaning. Monolingual dictionaries could attempt to highlight the relationship between senses, perhaps by ordering senses to show derived meanings and or by stating that a meaning has developed as an extended sense and fits into a metaphor that is operative in the language. To date, few monolingual dictionaries have attempted to represent metaphor in their entries, although the *Macmillan English Dictionary* (both in the printed and online versions), with 'Metaphor Boxes' and a section on Metaphor in the body of the dictionary, stands out in this respect. For the purposes of this

study, we shall consider the entries for the noun *field* in the *Macmillan English Dictionary Online* and in *The American Heritage Dictionary of the English Language*, shown in Figures 1 and 2, respectively.

1 [COUNTABLE] an area of land used for keeping animals or growing food

There were horses grazing in the next field.

a corn/wheat field

#### field of:

We drove past huge fields of barley and hay.

a. an area of land covered in grass and used for sport

The England striker left the field with a knee injury.

a sports/football field

#### take the field (=walk onto it in order to start playing):

The crowd gave Ripken a standing ovation when he took the field.

#### on/off the field:

He behaves badly both on and off the football field.

b. a large area of land or water where something is found

a gas field

c. a large area of land or water covered in a particular substance

an ice field

- d. MAINLY LITERARY an area of land where people fight a battle
- 2 [COUNTABLE] a subject that you study, or a type of work that you do

#### field of:

a chemist working in the field of polymer research

#### a field of study/endeavour/enquiry:

She has the ability to succeed in any field of endeavour.

#### a specialist/expert in a field:

Professor Edwards is one of the main experts in his field.

3 [SINGULAR] all the people or animals taking part in a race or competition: can be followed by a singular or plural verb

Henderson will be competing against a very strong field today.

- 4 [COUNTABLE] COMPUTING a part of a database that contains information of a particular type *Type your name in the User field.*
- 5 [COUNTABLE] PHYSICS an area where a particular force has an effect a magnetic field
- 6 [COUNTABLE] an area that a person or piece of equipment can see at one time
- 7 **the field** the team in baseball, cricket etc that is throwing the ball and trying to catch it when the other team hits it: can be followed by a singular or plural verb

Figure 1: Macmillan English Dictionary Online.

- 1. a. A broad, level, open expanse of land.
- b. A meadow: cows grazing in a field.
- c. A cultivated expanse of land, especially one devoted to a particular crop: a field of corn.
- d. A portion of land or a geologic formation containing a specified natural resource: a copper field.
- e. A wide unbroken expanse, as of ice.
- 2. a. A battleground.
- b. Archaic A battle.
- c. The scene or an area of military operations or maneuvers: officers in the field.
- 3. a. A background area, as on a flag, painting, or coin: a blue insignia on a field of red.
- b. *Heraldry* The background of a shield or one of the divisions of the background.
- 4. a. An area or setting of practical activity or application outside an office, school, factory, or laboratory: biologists working in the field; a product tested in the field.
- b. An area or region where business activities are conducted: sales representatives in the field.
- 5. Sports
- a. An area in which an athletic event takes place, especially the area inside or near to a running track, where field events are held.
- b. In baseball, the positions on defense or the ability to play defense: *She excels in the field*.
- c. In baseball, one of the three sections of the outfield: He can hit to any field.
- 6. A range, area, or subject of human activity, interest, or knowledge: several fields of endeavor.
- 7. a. The contestants or participants in a competition or athletic event, especially those other than the favorite or winner.
- b. The body of riders following a pack of hounds in hunting.
- c. The people running in an election for a political office: The field has been reduced to three candidates.
- 8. *Mathematics* A set of elements having two operations, designated addition and multiplication, satisfying the conditions that multiplication is distributive over addition, that the set is a group under addition, and that the elements with the exception of the additive identity form a group under multiplication.
- 9. *Physics* A region of space characterized by a physical property, such as gravitational or electromagnetic force or fluid pressure, having a determinable value at every point in the region.
- 10. The usually circular area in which the image is rendered by the lens system of an optical instrument. Also called *field of view*.
- 11. Computers
- a. An element of a database record in which one piece of information is stored.
- b. A space, as on an online form or request for information, that accepts the input of text: an address field.

Figure 2: field in The American Heritage Dictionary of the English Language.

In the Macmillan entry, the fact that sense (1a), that of a *field* used in the concept area [sports], is separated from sense (3), the people taking place in a sporting competition, makes it difficult to see the relationship between these two senses. Notice that the same problem occurs in the American Heritage Dictionary, in which changing the order of senses (5) and (6) might make things clearer. Although the notion of boundary is latent in the wording of the definitions (notice the frequent occurrence of the preposition *in*, as in 'An area *in which* an athletic event takes place', the idea of *field* as an enclosure is not really explicit in either entry.

Entries for *field* in even very good, large bilingual dictionaries do not address the subtle differences an analysis of collocational resonance can reveal. Let us look at the entry for *field* in the well-regarded *Collins Spanish Dictionary*.<sup>3</sup>

1. a.(agriculture) campo m

(= meadow) prado m

b. (geology) yacimiento m

2. (*sport*) campo m, terreno m de juego, cancha f(LAm)

(= participants) participantes mpl

(for post) opositores mpl, candidatos mpl

 $\Rightarrow$  is there a strong field? ¿se ha presentado gente buena?  $\Rightarrow$  to lead the field (*sport*, *business*) llevar la delantera  $\Rightarrow$  to take the field (*sport*) salir al campo, saltar al terreno de juego

IDIOM: to play the field (informal) alternar con cualquiera

- 3. (= sphere of activity) campo m, esfera  $f \Rightarrow$  field of activity esfera f de actividades, campo m de acción  $\Rightarrow$  my particular field mi especialidad  $\Rightarrow$  it's not my field no es mi campo or especialidad, no es lo mío  $\Rightarrow$  what's your field? ¿qué especialidad tiene Vd?  $\Rightarrow$  in the field of painting en el campo or mundo de la pintura  $\Rightarrow$  to be the first in the field ser líder en su campo
- 4. (= real environment)  $\Rightarrow$  a year's trial in the field un año de prueba en el mercado  $\Rightarrow$  to study sth in the field estudiar algo sobre el terreno
- 5. (computing) campo m
- 6. (military) campo  $m \Rightarrow$  field of battle campo m de batalla  $\Rightarrow$  to die in the field morir en combate
- 7. (electricity and electronics) campo  $m \Rightarrow$  field of vision campo m visual
- 8. (heraldry) campo m

Figure 3: The noun field in the Collins Spanish Dictionary.

Although the dictionary does an admirable job of grouping some related senses together, notice that there is no indication that the word campo, which is clearly the main equivalent for field as it appears in all but one of the eight identified senses, evokes land outside where people live, and like field, is a clearing that contrasts with mountains. That is why field is used in expressions like copper field. Fa-

<sup>3</sup> Boldface and color typesetting have been removed from the original in this figure.

ced with this entry, which is typical of bilingual dictionaries in that there is little attempt to link sense developments to one another, the speaker of Spanish may be bewildered by a word that can mean a cultivated area where human intervention is required (campo, with the subject label 'agriculture'), as well as an open space prado 'meadow' and area where a mineral is found naturally underground (yacimiento), all of which are grouped together in sense (1).

## 5 Conclusion

There is much to do in the analysis of resonance and of agricultural metaphor. This text aims only to show the potential of collocational resonance as a means of showing language change by mapping variations by use of mono- and multilingual lexicographical prototypes and of collocational networks. How dictionaries should incorporate collocational resonance into their descriptions is an open question at this point. For monolingual dictionaries, information about resonance is essential to show linkage across senses and accounts for collocational patterns, yet most contemporary dictionaries do not provide enough information from resonance for users to grasp the linguistic consequences of the metaphor. From a multilingual perspective, usually uncontroversial equivalents such as *field*, *champ*, and *campo*, are shown to develop different patterns of resonance, which—in our view—should have consequences for their representation in bilingual dictionaries.

## 6 References

Collins Spanish Dictionary Online. Accessed at: http://www.collinsdictionary.com/dictionary/english-spanish [06/03/2014]

Dictionnaire Historique de la Langue Française. (2006). Paris: Dictionnaries Le Robert.

Fillmore, C.J. (1975) An alternative to checklist theories of meaning. In *Papers from the First Annual Meeting* of the Berkeley Linguistics Society, pp. 123–132.

Furetière, Antoine. (1690). *Dictionnaire Universel*. La Haye. Accessed at :http://gallica.bnf.fr/ark:/12148/bpt-6k50614b [09/03/2014]

Hanks, P. 2000. Do Word Meanings Exist. In Computers and the Humanities 34, pp.205-215.

Hanks, P. (unpublished 2005). Resonance and the Phraseology of Metaphors. Paper presented at Phraseology 2005: The Many faces of Phraseology Conference. Louvain-la-Neuve.

Hanks, P. (2013). Lexical Analysis: Norms and Exploitations. Cambridge, MA: The MIT Press.

Macmillan English Dictionary Online. Accessed at: http://www.macmillandictionary.com/dictionary [02/04/2014]

Oxford English Dictionary Online. Accessed at: http://www.oed.com [03/03/2014]

Shetch Engine® tenten corpora. Accessed at: https://www.sketchengine.co.uk [10/02/2014]

The American Heritage\* Dictionary of the English Language. (2011). Boston: Houghton Mifflin Harcourt.

Tresor de la Langue Française informatisé. http://atilf.atilf.fr [10/03/2014]

Williams, G. (2008b). The Good Lord and his works: A corpus-based study of collocational resonance. In S. Granger, F. Meunier (eds.) *Phraseology: an interdisciplinary perspective*. Amsterdam: John Benjamins, pp. 159-174.

Williams, G. (2012). Bringing Data *and* Dictionary Together: Real Science in Real Dictionaries. In A. Bolton, S. Thomas, E. Rowley-Jolivet (eds.) *Corpus-Informed Research and Learning in ESP: Issues and Applications*. Amsterdam: John Benjamins, pp. 219-240.

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