# Language and health care: Food for thought*

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***Abstract:*** This paper upholds the view that the language of health care is *food for thought* for the linguist. As easily understood, 'thought' in this case implies observation, reflection, analysis, examination, in short, research. The following lecture consists of three large sections: *a)* introductory remarks; *b)* the concept of language through the theory of linguistic paradigms; and *c)* the contributions of these paradigms for a better understanding of the language of health care. The introductory remarks present the setting, which is knowlege society, and discusses two relevant notions in this framework: interdisciplinarity and applied linguistics. The second part makes a survey of the approach to language by means of four recent linguistic paradigms: structuralism, generativism, pragmatics, and cognitivism. The third part highlights the contribution of each paradigm for a better understanding of the language of health care, such as clinical linguistics, psycholinguistics, patient-doctor interaction, professional genres, etc. The paper closes with a long list of reasons that try to justify that the language of health care is food for thought.

***Key words:*** interdisciplinarity, knowledge, linguistic paradigms.

**Lenguaje y asistencia sanitaria: materia para la reflexión**

***Resumen:*** El presente artículo parte de la consideración de que el lenguaje de la asistencia sanitaria constituye, desde el punto de vista del lingüista, una «materia para la reflexión». En este sentido, la reflexión es aquí un concepto muy unido al de «conocimiento», proceso más complejo en el que convergen la observación, el análisis, el muestreo y, en definitiva, la investigación. La ponencia que sigue consta de tres grandes partes: *a*) cuestiones preliminares; *b*) el concepto de «lenguaje» de acuerdo con los diferentes paradigmas lingüísticos; y *c*) las contribuciones de dichos paradigmas en la comprensión del lenguaje de la asistencia sanitaria. Las cuestiones preliminares ofrecen el marco, que viene a ser la sociedad el conocimiento, destacándose dos nociones fundamentales: la interdisciplinariedad y la lingüística aplicada. La segunda parte presenta un breve recorrido por los cuatro paradigmas lingüísticos más recientes: el estructuralismo, el generativismo, la pragmática y el cognitivismo. La tercera parte destaca la contribución de cada uno de estos paradigmas para una mejor comprensión del lenguaje de la asistencia sanitaria, a través, por ejemplo, de la lingüística clínica, la psicolingüística, la interacción médico-paciente, los géneros profesionales, etc. Finalmente, este trabajo concluye con una larga lista de razones que tratan de justificar que el lenguaje de la asistencia sanitaria es «materia para la reflexión».

***Palabras clave:*** interdisciplinariedad, conocimiento, paradigmas lingüísticos.
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## 1. Introduction: Language and health care

### *1.1. Language and health care*

As its title clearly states, this conference tries to put together two different areas of university knowledge: language and health care. Both of them are very central in our lives, I daresay essential in our society. Health is undoubtedly, after life, the value that people appreciate most. Language, on the other hand, is the tool that makes us human because it lets us think, express our feelings, communicate our thoughts, plans, and ideas, and create knowledge.

### *1.2. Language and knowledge*

After mentioning language as the creator of knowledge, I cannot avoid quoting Wittgenstein's famous dictum on the relationship between language and knowledge. The Austrian philosopher very neatly stated (1922): "The limits of my language are the limits of my knowledge." This dictum clearly highlights the importance of the role of language in the creation and limit-setting of knowledge, and it inevitably leads me to make a comment on the general scenery of the society where we live in the first decade of the 21st century: the society of knowledge.

### *1.3. The society of knowledge*

The society of knowledge is the label that has been given to the first decade of the third millennium. We are aware that we live in the society of knowledge because of the great advantages we are benefiting from in fields such as computer

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science or health care. As easily understood, when contrasted with its preceding historical moments or stages, we find many specific features in the society of knowledge. I will underscore only two, which are basic for the interests of my lecture. They are interdisciplinarity and applied linguistics.

*(a) Interdisciplinarity*

The term interdisciplinarity can be simply defined as the interactive fertilization of methods and contents between two or more subjects, in order to produce enhanced and far-reaching results for a better understanding of reality. Interdisciplinarity has made possible a new, updated arrangement of knowledge, and has given birth to new subjects or disciplines. One of these new subjects or disciplines is academic and professional languages, which is the center of the research carried out in IULMA, the university institute that sponsors this conference. Interdisciplinarity, which is very common in our days, was something exceptional in the late past, when academics wanted to set clear limits in their epistemological territories in order to achieve academic respect.

In order to illustrate my assertion, I will mention only two new disciplines in this field arising from the combination of law and economics, on the one hand, and health care on the other. They are 'bioethics' and 'health care economics.' In a broad definition, bioethics is the study of moral issues occurring in health care and biological sciences. This discipline has produced its own vocabulary with terms such as 'autonomy,' 'quality of life,' 'change of life,' 'code of conduct,' 'code of professional ethics,' 'compassionate use,' 'sympathetic,' 'ethical dilemma,' 'ethics committee,' 'living will,' 'advance directives,' 'Good Medical Practice,' etc. The combination of economics and health care has also created its specific vocabulary: 'cost-benefit analysis,' 'cost-effectiveness,' 'health care costs and outcomes,' 'quality assurance,' 'evergreening,' etc.

*(b) Applied linguistics*

From a linguistic point of view, it should be emphasized that linguistics — that is, the science of language — has broadened its scope of action in this decade in the society of knowledge. In the past, most of the linguistic research was theoretical. Let's remember, for example, Chomsky's analysis of linguistic mental insights and intuitions. The weight of applied linguistics almost equalizes the power of theoretical linguistics. On the other hand, the meaning of the term 'applied linguistics' has recently changed. Not many years ago, it only meant the analysis of the strategies, methods, and techniques used in language teaching and learning. Today it has acquired a wider sense and, consequently, it may mean any application of language methods to the analysis of the language of professional communication, translation studies, publicity, legal or clinical purposes, etc.

## 2. The language of health care

Before I move into a deeper analysis of the relationships between language and health care, I would like to discuss some of the defining features of the language of health care. For our purposes, health care comprises medicine, pharmacy, and nursing.

*Medicine* is understood as the science and art dealing with the maintenance of health and the prevention, alleviation, or cure of disease. *Pharmacy* is the art or practice of preparing, preserving, compounding, and dispensing drugs, of discovering new drugs through research, and of synthesizing organic compounds of therapeutic value. Lastly, according to the *American Nurses Association*, *Nursing* is the protection, promotion, and optimization of health and abilities; prevention of illness and injury; alleviation of suffering through the diagnosis and treatment of human responses; and advocacy in health care for individuals, families, communities, and populations.

Now I will discuss four characteristics of the language of health care:

*(a) The aristocratic and popular elements of this language*

The aristocratic nature of the language of health care is quite surprising. This characteristic, which is common to all the health sciences both in English and Spanish, is revealed in the large proportion of Greek and Latin roots. Let's look at, for instance, words like 'antitussient,' 'hypertension,' 'haemorrhoids,' 'diuretic,' or 'contusion' and their corresponding Spanish versions, *antitusígeno*, *hipertensión*, *hemorroides*, *diurético*, or *contusión*. In English, however, there is a greater tendency to use popular expressions; here, we take 'popular' to mean 'words of Anglo-Saxon origin.' The ordinary Spanish-speaking citizen will quite naturally use words like *contusión* or *hemorroides*; English speakers, however, although they might well have the words 'contusion' and 'haemorrhoids' in their mental lexicon, will probably not use them. They are more likely to prefer the Anglo-Saxon variants 'bruise' and 'piles.' Think of the aristocratic imprint of *otorrinolaringología* in Spanish (ear, nose, and throat in English, which sounds more colloquial). Also, examine how much stronger the aristocratic tendency is in Spanish in the case of *algodón hidrófilo*, which in this language is a metaphor meaning "water-loving cotton," when we contrast it with the transparent American English 'absorbent cotton' or the plain British English 'cotton wool.'

*(b) Doublets*

All of this leads us to emphasise the presence of doublets or alternative forms, where one option will normally be of Greek or Latin origin and the other Anglo-Saxon. Here are a few examples: 'over-the-counter drug' and 'non-prescription drug,' 'water tablets' and 'diuretics,' 'blood thinners' and 'anticoagulants,' 'blood poisoning' and 'septicaemia,' 'severe thirst' and 'polydipsia,' 'shot' and 'injection,' 'bleeding' and 'haemorrhage,' 'parturition' and 'delivery,' 'steam' and 'vapour,' 'heal' and 'cure,' etc.

*(c) Anglicisms*

It is not easy for any European language to steer clear of the powerful influence of English, especially in the field of technical vocabulary. This effect is not limited to lexis, however; it also affects morphology, especially prefixes and suffixes.

Some anglicisms, like *spray*, *marketing*, or *screening*, maintain their original English forms in Spanish. Others have been given Spanish forms like *monitorizar* or *randomizar*. The English word 'blister' has adapted well in Spanish as a verb, *emblistar*, and its past participle, *emblistado*, is commonly used in the pharmaceutical world. Another popular word is *estrés*, which has also found its place in the Spanish system as a verb, *estresar*, and as an adjective, *estresante*. One curious anglicism is *anfetamina*, a word that was originally formed in English ('amphetamine'), like many other words in international technical vocabulary, as an acronym, with 'a' from 'alpha,' 'm' from 'methyl,' 'ph' from 'phene,' 't' from 'thyl,' and 'a' from 'amine,'

While it is true that there is an overuse of anglicisms, it is equally accepted that in some cases they are attractive and also useful for three reasons: First, the economy of Anglo-Saxon words, as they are usually shorter; second, their precision, since once they have been coined their exact meaning tends to be permanently fixed; and third, their levelling effect, since they tend to be accepted in all major languages.

*(d) Metaphors*

The list of metaphors is very long and so we do not have either the time or space to deal with it. Let's only remember the poetic image that we have just mentioned of *algodón hidrófilo*, or "water-loving cotton."

## 3. Why linguists are interested in the language of health care: Food for thought

Before moving forward in the analysis of the contents of my lecture, I would like to say that, as a linguist, my examination of language and health care will be logically carried out from the point of view of linguistics.

*(a) Motivation: Food for thought*

In most university lectures or papers analyzing a subject or a problem, the first thing that is usually dealt with is the question of 'motivation,' that is, which is the psychological force that has prompted us to embark on what we are doing? Motivation in these academic papers and documents is commonly presented in a clear statement containing the reasons why a specific problem is being tackled. In our case, the topic of our motivation could be summarized in the question "why are linguists interested in the language of health care?" The answer is very straightforward and clear: It's because the language of health care is *food for thought* for linguists. As easily understood, 'thought' in this case implies observation, reflection, analysis, examination, in short, research.

The English academic etiquette followed in conferences and learned circles often makes use of some puns or playwords in order to make messages more appealing or attractive. We have all heard some sorts of puns that exploit colorful alliterations like "His latest (but not last) book is a real leap forward," or "And now last, but not least," etc. One of those engaging phrases that has drawn my attention is "This paper is food for thought."

When I say food for thought in our context, I very sincerely express that the language of health care is an academic challenge, a sort of gold mine open to empirical research that will enrich our professional and academic knowledge. It simply signifies that it offers stimulating material for deep reflections, new arrangements, and above all, for a better understanding of the linguistics of health care.

*(b) Jakobson. Terence. Martínez Linares*

Roman Jakobson (1896-1982) was one of the seminal minds of the 20th century because of his major contributions not only to the field of linguistics, but also in anthropology, literary studies, semiotics, and language disorders — that is, he was among the first modern pioneers in the study of the language of health care. He was very sharp-witted when he managed to reformulate one maxim that Terence had articulated two centuries before Christ. Terence had said: "Homo sum; humani nil a me alienum puto" (I am a person and therefore I think that nothing human is alien to me). In his imitation of Terence, Jakobson asserted: "I am a linguist and therefore nothing connected with language is alien to me." With this statement, he was opening research doors for others and encouraging them to enter new areas of linguistic analysis different from literary or colloquial language, that is, what we today call academic and professional languages. He believed what he said and he did one of the most original studies of aphasia from a linguistic point of view (1973).

Last year, our University Institute for Applied Languages held a conference called Academic and Professional Languages. There was an excellent paper presented by doctor Mª Antonia Martínez Linares that has not yet been published called "Language and Therapy." In my opinion, it was an outstanding personal summary of what linguistics could do in the area of health care. She divided her presentation into three parts. The first one had to do with the treatment of the impairments in speech and the voice. She supported Roman Jakobson and David Crystal's point of view that the treatment of these problems needs the collaboration of specialists familiarized with the structure and functioning of language, including intonation and body language or kinesics. The second part of her paper dealt with the proper exploitation of all the theoretical tools and devices, such as subcategorization rules, selection rules, etc., in order to give an account of the language impairments examined by psychiatrists, psychoanalysts, or psychologists. The third part analyzed the multidimensions of the language employed in the interaction between patients and health care professionals.

At this introductory stage of my talk I would like to let you know that whatever I say from now on will have only one goal: to justify that the language of health care is food for thought.

## 4. What is language? Language theories, models, and paradigms

Since this conference deals with language and health care, one of our main concerns will be to determine the meaning of the word language, that is, what we understand as language.

Everybody knows what language is because language is a faculty or ability that belongs to all human beings. However, when analyzed from a scientific point of view, language is a multifaceted phenomenon.

### *4.1. Language and the world. Theories and models. Paradigms*

In order to understand reality or the world around us, we need to resort to theories and models, which orient us in our comprehension of anything in life. We cannot do much without theories or models. In their academic papers, a great number of American scholars often emphasize the importance of *theory-building* when trying to open new epistemological paths.

A theory is a body of generalizations, expressed with a certain degree of abstraction, whose aim is the facilitation of a better understanding of the nature of things, what ancient Classics called *de rerum natura*. A model, however, is an image or metaphor that attempts to describe or explain, in an accessible and coherent form, a specific phenomenon of reality. Therefore, a theory is more general while a model is more specific. Let's remember two things about theories. First, they are changing all the time in science, health care, linguistics, etc., and in any other attempt to comprehend any aspect of life whatsoever. For example, last year, according to a new theory, Pluto was not a planet anymore. It was downgraded to a second-rate celestial body. Secondly, not all theories enjoy the same status — that is, not all of them are on an equal footing. A few of these theories have a higher category; they are a sort of great umbrella that encompasses other theories. We call these ample theories paradigms, a concept which is owed to Thomas Kuhn (1975).

A paradigm is a very useful concept for the advancement and research of a discipline because, as a theory of theories, it offers scholars: (a) a new setting for the stimulation of new *theories*; (b) different relevant facts and events that may become research *problems*; and (c) tentative *solutions* to the proposed problems.

### *4.2. Linguistic paradigms*

In the last fifty years, the study of language has been carried out under the aegis of different paradigms, which have been the orthodoxy in the conception of language during the time that they reigned, that is, in their greater periods of splendor and influence. All paradigms are followed by new paradigms that displace the position of supremacy, control, and dominance held by previous paradigms. A paradigm could be understood as the embodiment of an epistemological way of thinking that emerges with new ideals in order to deny, confront, or defy the previous paradigm. However, paradigms do not die; when they do not reign, they may stay in a more or less dormant position, that is, they adopt a second-rate status. They may reappear some decades later with the same name preceded by the prefix 'neo-,' such as neo-structuralism, etc.

I will comment on four of the most relevant paradigms in the last fifty years: structuralism, generativism, pragmatics, and cognitivism. I will expound, in a cursory way, the vision that each paradigm has had about the nature of language — that is, what language has been for each one of them. Later, in points four, five, six, and seven of my lecture, I will try to highlight each paradigm's contribution for a better understanding of the language of health care. We should not forget another great paradigm, 'Diachronic linguistics.' To this effect, it is rewarding to read what Dr. Françoise Salager and Dr. Mª Ángeles Alcaraz have done in this field.

Structuralism taught us that language consisted of small units that form structures. In other words, structuralism had an atomistic vision of language. Consequently, structuralism paid a great deal of attention to the study of words and sounds — that is, vocabulary and phonetics.

For generativism, language was a mental phenomenon that could be understood through the careful examination of our mental intuitions and insights. For them, the central component of language was not vocabulary, but morphosyntax. In this paradigm, morphosyntax looms up as the backbone of language, as the organizing axis of language.

Pragmatics examined language from the point of view of communication. This paradigm has offered us scores of theories about face-to-face interaction, communicative genres, conversation analysis, speech acts, linguistic politeness, etc. Three key words of this paradigm are discourse, text, and context.

For cognitivism, language is one component of cognition. Metaphors and metonymy are two mainstream devices of the cognitive process.

## 5. What the structuralist paradigm has done for a better understanding of the language of health care. Vocabulary and translation. Phonetics and clinical linguistics

I said before that for structuralism, language consisted of units, for example, words or phonemes, that held certain degrees of relationships. This linguistic paradigm has offered many theories and models that have helped us understand the language of health care better. I will examine only two components of language: vocabulary and phonetics.

### *5.1. Vocabulary*

The vocabulary of a language is the collection of all its words or lexical units. Vocabulary is the most priviledged component of language since it not only carries the largest semantic weight of any sentence or utterance, but also fulfils its symbolic or representational function better than any other linguistic component.

I will divide my study of vocabulary in the language of health care into four parts: contrastive analysis, collocations, semantic fields, and terminology.

#### *(a) Contrastive analysis*

'Contrastive analysis' is a concept that appeared in the area of language teaching and learning in the '60s of the 20th century with the meaning of the systematic study of a pair of languages with a view to identifying their structural differences and similarities. It has several versions. In its more recent

version, it broadly makes reference to the negative influence of one's own mother tongue when learning or examining another one. It is based on the idea that our mother tongue is a filter that affects the second language, creating a linguistic interference, which inevitably leads to making errors and mistakes. Hundreds of papers have been written about contrastive analysis. In the field of the language of health care, there is a first-rate work written by doctor Fernando Navarro (2005) entitled "Diccionario crítico." This excellent diccionary is a must for translators and researchers doing contrastive analysis.

### *(b) Collocations*

Collocation is the British term that makes reference to the most frequent combinations of words, such as nouns and verbs, nouns and adjectives, etc. Computational linguistics has made a great leap forward in the arrangement of this horizontal combination of words.[a] Here is an example of some of the combinations of the word drug, with verbs and with adjectives:

Verbs:

- *administer a drug* (administrar un fármaco)
- *approve a drug* (autorizar un fármaco)
- *prescribe a drug* (recetar un fármaco)
- *withdraw a drug* (dejar de tomar un fármaco)

Adjectives:

- *prescription drug* (fármaco que se dispensa con receta médica)
- *over-the-counter drug* (fármaco que se dispensa sin receta médica)
- *non-prescription drug* (fármaco que se dispensa sin receta médica)
- *miracle drug* (fármaco milagroso)

### *(c) Semantic fields*

Semantic fields are formed by lexical units that cluster around another one, which acts as the mainstream word. This concept, which is traditional, has been very productive for a better understanding of the arrangement of words. Here is a sample of what could be a semantic field around the English word *pain:*

1. Nouns indicating variants for «pain», i.e., partial synonyms: «discomfort», «ache», «pang», «smart», «stitch», «throes», «twinge» etc.
2. Qualifying adjectives for pain: «stabbing», «dull», «sharp», «abiding», «continuous», «sustained», «bearable», «unbearable», etc.
3. Verbs indicating painful suffering: «suffer», «bear», «abide», «endure», «experience», «undergo», «sustain», etc.
4. Nouns for the effects of pain: «irritability», «nervousness», «annoyance», «excitement», «agitation», «confusion», «disturbance», etc.
5. Nouns indicating the absence of pain, i.e., partial antonyms: «comfort», «calm», «well-being», «analgesia», etc.
6. Nouns defining analgesic products: «analgesic», «sedative», «tranquillizer», etc.

Many other semantic fields in the language of health care need a closer examination, for example, the language of the 'quality of life,' the language of 'Good Medical Practice,' etc.

### *(d) Terminology*

The study of terminology is central in any professional vocabulary. It usually consists of three groups of words: Technical terms, semi-technical terms, and everyday vocabulary frequently used in the speciality.

*Technical vocabulary* is formed by monosemic lexical items, i.e., having only one meaning. This meaning only makes sense in the realm of a theory. Technical-vocabulary terms differ from those of ordinary speech in that the former are monosemic while the latter are polysemous, ambiguous, and carry connotations. There are a large number of technical health care terms in both English and Spanish: 'analgesics,' 'anaesthetics,' 'antiallergic,' 'antibiotics,' 'antidepressant,' 'antihypertensive,' 'antihistamines,' 'anti-inflammatory,' 'antispasmodics,' 'anxiolytic,' 'tranquillizer,' 'diuretics,' 'hypnotics,' 'sedatives,' etc.

*Semi-technical vocabulary* contains lexical items belonging to everyday language, but which have acquired one or more new meanings within the speciality. This type of vocabulary, which is polysemous, is mostly formed by a process of analogy, adding new meanings to the main body of traditional meanings. Words in this group pose greater difficulties because they come from the mainstream vocabulary pool and have acquired new meanings without losing their old ones. A clear example of this phenomenon is the word "discharge":

> **discharge**[1] *n/v*: GRAL descarga; descargar; V. *unload, empty; charge*. [Exp: **discharge**[2] (FARMACOTERAPIA liberar ◊ *A spray discharges a fine jet of liquid from a pressurized container*; V. *release, deliver, eject*), **discharge**[3] (TECNO FARM descarga [de un aerosol]; en esta acepción es sinónimo de *delivery* y de *spray*), **discharge**[4] (GRAL flujo, secreción; segregar, secretar ◊ *His stomach discharged digestive juices normally*; V. *secretion; issue; ear discharge; sniffle; flow; secrete; astringent*), **discharge**[5] (GRAL emisión; emitir; expulsar ◊ *Phlegms are discharged through the mouth*; V. *gas discharge*), **discharge**[6] (GRAL/FARMACOTERAPIA supuración; supurar ◊ *The purulent discharge from a wound*; V. *suppuration, pus discharge; discharging*), **discharge**[7] (GRAL/FARMACOTERAPIA derrame ◊ *A haemorrhage is an abundant discharge of blood from the blood vessels*), **discharge**[8] (GRAL/FARMACOTERAPIA excreción, excretar ◊ *Diuretics increase urine discharge*; V. *excrete, excretion*), **discharge**[9] (FISIO ANAT defecación; V. *stool, defecation*), **discharge**[10] (FISIO ANAT flujo vaginal, también llamado *vaginal discharge*; V. *menstrual flow*), **discharge**[11]

(ASIST SANIT alta hospitalaria; V. *absolute discharge, patient discharge, discharge by transfer, discharge from hospital*)].

*Everyday vocabulary frequently used in the speciality* contains words from the general lexicon that, like those of the second group, maintain their original meanings but have a central or peripheral function in the speciality. These lexical items are not technical in the strict sense of the word because, as we have already explained, they are used with their original or primitive meanings. But, it could be said that they belong to the health care vocabulary on account of their frequent occurrence. Words like 'reaction,' 'analysis,' 'effect,' 'agent,' 'prove,' 'test,' etc. belong to this group.

### *5.2. Translation and interpreting. Beware of paronymous temptation*

Translation and oral interpreting, with all its communicative and cultural implications, are probably the first professional activities that come to our mind when putting together the terms language and health care. Everything that has been said about contrastive analyis, semantic fields, collocations, and terminology are basic focal points in translating and interpreting.

Professionals of translation and oral interpretation should be aware of the appeal produced by a paronymous word found in the target language. We call this perilous attraction 'the paronymous temptation.' For example, the meanings of the words 'adequate,' 'certain,' 'particular,' 'apparent,' 'observable,' etc., very seldom coincide with the meaning of *adecuado*, *cierto*, *particular*, *aparente*, *observable*, etc. However, this attraction unfortunately also occurs in the most technical terms. As Navarro (2005: 54) explains, "A distinction must be made between the prurient staphylococcal infection in a conglomerate of boils, which we [in Spain] call *ántrax*, and which English speakers call 'carbuncle' and the serious animal-borne infection by Bacillus anthracis, which we [in Spain] call *carbunco*, and English speakers call 'anthrax'."

### *5.3. Phonetics. Clinical linguistics: Speech pathologies*

Phonetics was probably one of the branches of linguistics that found its most spectacular advancement and results during structuralism. In the early '70s, one of my professors of English phonetics at the University of Reading, Prof. David Crystal, was called by an important hospital in London. He was requested to give a technical description of the voice impairment suffered by a patient. Since then, he has been writing about the linguistic description of speech pathologies. His pioneer work cooperated in the formation of a fairly new discipline called clinical linguistics. In 1991, the *International Clinical Phonetics and Linguistics Association* was founded and its official journal soon appeared, *The Journal of Clinical Linguistics and Phonetics*.

Today, clinical linguists are found in Speech-Language Pathology or Linguistics departments. From the point of view of linguistics, Clinical Linguistics is a sub-discipline of linguistics involved in the application of linguistic theory to the study of the voice and speech pathologies.

## 6. The contribution of generativism to a better unerstanding of the language of health care. Morphosyntax. Psycholinguistics

The generativist paradigm started to gain strength and to displace structuralism in the early '70s of the 20th century.

### *6.1. The first change: Morphosyntax as the main component of language*

If vocabulary and phonetics were clearly the two language components to which structuralism paid more attention to in its analysis and research, when we come to generativism, morphosyntax becomes the core of all the linguistic system, the main component of language, the organizer of the sentence — this last term understood as the standard unit expressing our thoughts, plans, and feelings.

This is one of the main novelties in the shift from structuralism to generativism, the emergent role displayed by morphosyntax. It was not an easy change. It was controversial from the very beginning, and a little later, heterodox voices did not take long to be heard within the same paradigm. Fortunately, the analysis of morphosyntax has given rise to scores of theories, models, and rules about the mainstream role of this language component, which might prove useful in the analysis of the language of health care.

### *6.2. The second change: Language impairments. Morphosyntactic deficits. What linguistics can do*

Luckily for generativism, research done in the area of language impairments by health care specialists has shown the centrality of morphosyntax. Although it is true that not all health care specialists agree about the nature of language impairments, whether pragmatic, syntactic, or semantic, most of them highlight the chief role of the morphosyntactic component. I will mention an article published by Müller in 2005 about language impairments. In his study on autism, Williams syndrome, apraxia, and other impairments, he affirms, "It could therefore be stipulated that several developmental disorders share some core linguistic impairments, most likely within the morphosyntactic component […] and there will be little argument about the morphosyntactic deficits that are often found in specific language impairments, being linguistic in nature." This concept of 'morphosyntactic deficit' is very recurrent throughout his article.

In my opinion, linguistic theories and models could contribute to a better understanding of these morphosyntactic deficits with at least two initiatives. The first would be to classify the morphosyntactic deficits found in language impairments, and the second, to accomplish a linguistic description of their different degrees, and where possible, to attempt an explanation of the nature of the morphosyntatic deficits.

### *6.3. Language and the mind. Psycholinguistics: language acquisition, language impairments*

If the first change in this paradigm was probably the shift to the morphosyntactic component, the second one might be said to be the appearance of psycholinguistics as a new

discipline. In my opinion, clinical linguistics was born in the setting of structuralism and most of its research has been done in the analysis of the voice and speech impairments. Psycholinguistic, however, examines language as a system. Pchycholinguistics is connected with the psychology of language, but from a linguistic point of view they are not the same. For many linguists, psycholinguistics was born in the setting of Chomsky's paradigm — that is, generativism.

## 7. The contribution of pragmatics to a better understanding of the language of health care. Communication. Meaning and context

The introduction of the paradigm of pragmatics in linguistics in the late '80s of the last century meant a radical change in the aims and methods applied to the study of language. All of a sudden, although in a slow manner, the interest that linguistics had displayed toward the study of the relationship between language and the mind gave way to the investigation of language as communication. I will mention only two fundamental issues in this paradigm: the importance of the term 'text' and the plethora of linguistic theories about communication.

### *7.1. Text. Professional genres*

Texts are the center of linguistic research in pragmatics, and professional texts are called genres. Each profession has its own genres. For example, the judgment or the contract are legal genres. Some of the professional genres in health care are the living will, consent to participate in research, etc. One of the problems of professional genres is that citizens, as taxpayers, want to understand them. In the Anglo-American world, there is a movement called Plain English Campaign defending the use of plain language in technical communication. President Clinton created an yearly prize called 'Plain English Award' to be given to professionals and agencies that had made the greatest effort in the communication with citizens. One of the most controversial genres is the 'patient information leaflets.' In the past, it contained descriptive language that very few citizens understood. Now it makes use of a clearer interactive language. For example, "if you answer yes to any of these questions do not take these tablets:

- Have you had any allergic reaction to aspirin?
- Are you allergic to other pain-killers?
- Are you taking regular medication for high-blood pressure?
- Are you pregnant?
- Are you breast-feeding? etc."

### *7.2. Theories and model in the analysis of communication in health care*

The plethora of theories and models is very great and, fortunately, most of them, if not all, are applicable to the language of health care. By way of example, and due to the lack of time, I will mention only the names of theories connected with:

a) Language interaction between patients and health care professionals
b) Communicative strategies
c) Conversation analysis
d) Silence and indirectness. Speech acts
e) Linguistic politeness. Hedges
f) Cultural analysis

## 8. The contribution of cognitivism to a better unerstanding of the language of health care. The apprehension of reality

Cognitivism is connected with cognition. It attempts to teach us how we apprenhend reality by means of metaphors and metonimy. The book called *Metaphors We Live By* (Lakoff and Johnson, 1980) opened our eyes to how metaphors play an important role in our shaping of the world. It is very interesting to examine, for example, the number of health care terms that are related to the names of the parts of our body

## 9. Conclusions. Reasons justifying that the language of health care is food for thought

This lecture has attempted to show that there is a solid common ground for interdisdisciplinary work between linguists and health care specialists. However, the first thing we have to accept is that a great deal of empirical work is necessary. I am sure that every linguistic model or theory, from the analysis of intonation, sounds, and words, to the study of syntax, professional genres analysis will be useful for a better understanding of the language of health care.

At the beginning of my talk I said that one of my objetives was to justify why the language of health care was food for thought. In summary, I will give thirteen reasons:

a) Communicative strategies, speech acts, syntax, and vocabulary of language as a healing tool in psychiatry and psychology.
b) Communicative strategies, speech acts, syntax, and vocabulary of language as a diagnostic device.
c) The analysis and classification of deficits of morphosyntax.
d) The language of consciousness, mental health, and drugs.
e) The language of health care professional-patient communication
f) The language of health in professional communication: language in articles, papers, symposia, and conferences.
g) The language of pharmacy.
h) Research in many semantic fields such as the language of pain, the language of health and disease, the language of quality of life, the language of bioethics and health care economy, etc.
i) The language of Good Medical Practice and the language of civil actions for health care malpractice.

j) Communication. Culture. Strategies. Politeness.
k) The Plain English Campaign, civil actions, and the language of health care.
l) The language of health care protocols
m) The language of health care in literary texts and in popular publications.

Let me close my talk with these words: We would be most satisfied if the brief outline we have presented today may prove useful to encourage scholars to do more interdisciplinary research in language, speech, communication, and cognition within the realm of health care.

## Note

[a] In 2002, Oxford University Press published *Oxford Collocations*. Previously, in 1997, John Benjamins had brought out *The BBI Dictionary of English Word Combinations*, and in 2004, Bosque published an incomparable dictionary of word combinations called REDES.

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# Sobre falsos neologismos y cambios conceptuales (I): *patología*

Francisco Cortés Gabaudan


Jean Fernel, retrato publicado en su *Universa Medicina* (1577)

El médico francés Jean Fernel (<http://fr.wikipedia.org/wiki/Jean_Fernel>) pasa muchas veces por ser el creador, en torno a 1550, de la palabra *pathologia,* cuyo uso se extendió por la publicación en 1554 de un grueso tratado titulado *Medicina* (en este enlace: <http://web2.bium.univ-paris5.fr/livanc/?cote=00391b&p=1&do=page> podemos ver su portada); su contenido se descomponía, aparte de unos capítulos introductorios, en 7 libros de fisiología, 7 libros de patología y 7 libros de terapéutica. Curiosamente, Fernel no hace ninguna alusión a que haya acuñado él la palabra; es más, la usa como título de una parte de su tratado pero no la utiliza en el propio texto ni alude a ella. Fernel no se sentía creador de esta palabra; téngase en cuenta que *pathologia* está documentada en latín medieval, en glosarios de los siglos VI o VII, y los lexicógrafos sospechan con razón que, de hecho, estuvo en uso en griego (παθολογία, *pathología)* , aunque no la podamos documentar en ningún texto griego conservado.

Lo que sí aparece en griego antiguo es τὸ παθολογικόν *(tò pathologikón)*, la forma neutra sustantivada del adj. *pathologikós*, con un significado bastante parecido a *pathologia* como podemos comprobar en estos textos:

> Algunos dividen [el estudio de la medicina] en dos partes, por un lado la parte teórica, por otro la práctica; esta parte práctica la dividen en la sección dedicada a la higiene y en la de la terapéutica. También los hay que la dividen en lo que está de acuerdo con lo natural y lo que está en contra de lo natural; otros en la fisiología, la patología [τὸ παθολογικόν, *tò pathologikón*] y la terapéutica. [Sorano de Éfeso (siglo II): *Gynaeciorum* (tratado sobre las enfermedades ginecológicas), 1.1.]

> Partes del arte de la medicina: las primordiales son la fisiología, la etiología o patología, la higiene, el estudio de los signos (τὸ σημειωτικόν) y la terapéutica. [Pseudo Galeno (probablemente del siglo IV o posterior): *Introductio seu medicus*. Kühn, XIV, 689.]

Vistos estos textos, podemos compararlos con lo que dice J. Fernel en la introducción de su obra de 1554:

> Se establecerán cinco partes de la medicina en este orden: que la primera de todas sea la φυσιολογική [la fisiología], que se dedica a la naturaleza del hombre totalmente sano, todas sus facultades y funciones; la segunda,

la παθολογική [la patología], que investiga las enfermedades y afecciones que pueden acaecer al hombre más allá de lo que es natural, cuáles son sus causas, cuáles son los signos que los muestran; la tercera, la προγνωστική [el arte de pronosticar], que explica los signos con los que los médicos presagian el futuro, cuál será el curso de las enfermedades, cuál su conclusión; la cuarta, la ὑγιεινή [la higiene] [...]; la última parte, la θεραπευτική [la terapéutica]».

Parece claro que Fernel ha leído los textos griegos que hemos presentado y que los sigue en buena medida. Fernel, de acuerdo con los historiadores de la medicina, innovó en cuanto que agrupó bajo la patología ramas de la medicina que hasta él estuvieron separadas, como son la etiología y el estudio de los signos.

Nos falta una cuestión conceptual que se puede enunciar de forma muy sencilla, así: ¿Por qué en francés, alemán o español se define *patología* como el estudio de las enfermedades, sus causas, síntomas, signos, mientras que en inglés se dice que es el estudio y diagnóstico de la enfermedad a partir del examen de los órganos, tejidos, fluidos corporales, autopsia? Dicho de otra manera, ¿por qué en inglés *patología* equivale a lo que en español se designa como *anatomía patológica*? Se debe a la evolución del estudio de la patología, que se orientó con Giovanni Morgagni (1682-1771) a establecer la relación entre los síntomas de la enfermedad y sus consecuencias, estudiadas a la muerte del paciente mediante la autopsia; el otro gran responsable de esta deriva fue Rudolf Virchow (1821-1902), que estableció la relación entre las enfermedades y los cambios celulares, la llamada patología celular. Dada la importancia fundamental de estos planteamientos para la comprensión de las enfermedades, el inglés suele usar *pathology* de forma restrictiva, mientras que francés, alemán o español siguen usándolo de forma más general, más cercana a los planteamientos de J. Fernel y, como hemos intentado demostrar, también a los de Sorano de Éfeso.



## Success was not guaranteed

Juan V. Fernández de la Gala

Pedro Miguel Echenique. Donostia International Physics Center, DIPC

Lo cuenta con mucha gracia el investigador español Pedro Miguel Echenique. Lo hace, quizá, como una disculpa por su costumbre de redactar las diapositivas en inglés, a veces incluso ante una audiencia mayoritariamente española. Consigue así desarmar cualquier suspicacia que pudiera considerar este detalle una petulancia o una presunción por su parte. El profesor Echenique es catedrático de Física de la Materia Condensada en la Universidad del País Vasco y fue Premio Príncipe de Asturias de Investigación Científica y Técnica en 1998. En sus intervenciones públicas, habla un inglés muy correcto y muy ágil, pero él asegura que no siempre fue así.

Para demostrarlo, pone como ejemplo su primer seminario de investigación, impartido en la Universidad de Cambridge en 1976, nada más terminar el doctorado. Tras su intervención hubo una sola pregunta: se levantó entre el público el eminente físico americano Philip Warren Anderson (que sería Premio Nobel solo un año después), le miró a los ojos y, tras una breve pausa, le preguntó: «Pedro, where did you learn English?». Sabiendo que estaban en Cambridge, el profesor Echenique no dudó en la respuesta: «In Oxford, Sir». A lo que Anderson replicó: «And… did you ask for your money back?».

El aplomo juvenil de Echenique se estrelló contra aquella pregunta inesperada, que nada tenía que ver con su exposición. En mitad del naufragio dialéctico, la única respuesta que logró articular fue: «No, Sir. Success was not guaranteed». Casi nadie la escuchó, porque la sala en pleno reía aún atronadoramente la ocurrencia de Anderson. Recordar esta anécdota (y hacerlo de modo tan jovial como él lo hace) constituye una cura de humildad que le ha servido como lección perenne en su carrera de investigador. Vale la pena tomar nota.