What do Internet metaphors reveal about the perception of the Internet?[1]

Denis L. Jamet, University of Lyon (Jean Moulin – Lyon 3)

(denis.jamet@univ-lyon3.fr)

Abstract

The objective of this article is to throw light on what Internet metaphors – i.e. the metaphors used every day by English and French native speakers – reveal about their perception of the Internet. Within the framework of cognitive linguists such as Lakoff & Johnson, Sweetser, Turner, etc., I will analyze Internet metaphors to bring out the conceptual metaphors generating the various Internet metaphors, in English and in French. The main aim of this paper is to examine Internet linguistic metaphors a.k.a. Internet metaphorical expressions used to conceptualize the Internet, and try and see what conceptual metaphor(s) structure(s) the everyday metaphors we use to refer to the Internet, as well as the changing perception we have of it.

Dieser Artikel untersucht Metaphern, mit denen die Technologie des Internet durch englische und französische Muttersprachler konzeptualisiert wird. Theoretischer Ausgangspunkt ist die kognitive Metapherntheorie, die von Lakoff & Johnson entwickelt sowie von Sweetser und Turner weiterentwickelt wurde. Ziel der Untersuchung ist es, die unterschiedlichen sprachlichen und konzeptuellen Metaphern aufzudecken und zu analysieren sowie Überlegungen dahingehend anzustellen, inwiefern ein konzeptuell metaphorischer Wandel im Zusammenhang mit einem Wahrnehmungswandel des Internet steht.

1. Introduction

Any cognitive linguist is sure to know Lakoff and Johnson's famous statement about the omnipresence of metaphor in human cognition and human life:

> [M]etaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature. (Lakoff and Johnson 1980:3)

Borrowing from Lakoff and Johnson, I would say that the Internet has nowadays become an "everyday, pervasive" medium. Therefore, it makes sense to study the Internet together with the metaphorical process. The main question I would like to address in this paper is: „What can Internet metaphors reveal about the changing perception of the Internet?" The analysis will rest on the theoretical framework of cognitive linguistics and more

---

[1] This paper was originally delivered at the University of Wellington, New Zealand.

precisely on Lakoff and Johnson's (1980) and Sweetser's (1990) works on metaphor.

To carry out this analysis, I will first define the very terms *metaphor* and *perception*. By *metaphor*, I mean the „conceptual device enabling human beings to use a source domain to talk about and very often structure another target domain, the target domain being generally unknown". Sweetser (1990:8) defines *metaphor* in this way:

> Metaphor allows people to understand one thing in terms of another, without thinking that the two are objectively the same.

Therefore, I will deal with the analogical process by which human beings notice a resemblance, a likeness between two different conceptual domains. For cognitive linguists, metaphor is not restricted to a purely aesthetic or literary device, but plays a major cognitive role. By *perception*, I mean „the state of being or process of becoming aware of something in such a way" (definition borrowed from *The Concise Oxford English Dictionary*). The linguistic theory I will mostly draw on in this paper is cognitive linguistics, as the two notions of *metaphor* and *perception* are intimately linked in this theoretical framework. More specifically, my work will mostly be based on the *Conceptual Metaphor Theory*, as elaborated by linguists such as Lakoff, Johnson, Sweetser, among others.

According to cognitive linguistics, meaning does not objectively exist (what Lakoff and Johnson (1980) call *the objectivism myth*), and it is closely related to our human, bodily experiences, and therefore to our perception, hence the notion of embodiment. Meaning is the result of a mental construction and of our perception which is based on *ICM, idealized cognitive models* (as defined by cognitive linguists such as Fauconnier, Langacker, Lakoff, Johnson, etc.); those idealized cognitive models are based on our knowledge and our experience of the world we live in. But what's more, those models structure the way we think, the way we behave and the way we speak. It is worth noting that the idealized cognitive models are different from one speaker to another, and are prone to various re-elaborations depending on the situation of utterance and the speakers involved. As a matter of fact, one of the core principles of cognitive semantics is this everlasting redefinition of idealized cognitive models. If I utter a very basic sentence such as: *Paul, Susan's husband, is a real bear*, I am using a 'popular' idealized cognitive model for *bear*, and certainly

not a scientific idealized cognitive model, because when I utter *Paul is a bear*, I am not saying that Paul is a „a large, heavy mammal which walks on the soles of its feet, having thick fur and a very short tail" (*Concise Oxford English Dictionary*), but rather something like Paul is „a rough or bad-mannered person".

To deal with the tricky issue of the relations between metaphorical language and the perception of the Internet, I will raise three main questions which will structure the paper:

1/ First, what are the roles played by metaphors and, more precisely, by metaphors in specialized, technical languages such as the language of the Internet?

2/ Which source domain/s seem/s more relevant to conceptualize the target domain of the Internet? Which conceptual domains are used for Internet metaphors? In other words, why and how do the metaphors which are used by common Internet users – very often subconsciously – partially condition the perception of the Internet? In other words, my paper aims to analyze the metaphors used to conceptualize the Internet, and try and see what underlying conceptual metaphor(s) can be found.

3/ Finally, I will try to show that there has been a gradual change in the perception of the Internet from the onset (mid 1990s) to the current period, with more and more people going online. The change in the way people use the Internet is undeniable, and it is interesting to examine whether this change is to be found in the language people use nowadays to refer to it.

2. The role of metaphors in the language of the Internet

The language of the Internet is known as a technical language, a language for specific purposes[2]. Yet, just like ordinary, standard, everyday language, it is no exception to the rule and it contains a lot of metaphors, contrary to the traditional view according to which technical languages, supposedly objective, would not make use of metaphors, because of their very subjective nature. I

---

[2] For a quite comprehensive list of terms referring to the Internet, see
http://www.olf.gouv.qc.ca/ressources/internet/index/index.htm or
http://www-rocq.inria.fr/qui/Philippe.Deschamp/CMTI/glossaire.html.

first want to show that various metaphors are indeed found in the language of the Internet, and that without them, we could not really talk about it.

The Internet was first called *the world wide web*, very often abbreviated to *the web*, a *web* which you can *surf* ("naviguer", "sail" in French) on the *information highway*, and, if you are lucky, with *broadband* ("haut débit" in French). In most languages, all Internet metaphors have been borrowed from English, which is the language where the Internet was born, and the other languages just borrowed the terms, with two possible options: either the *signifier* and the *signified* were borrowed (*Internet*) or just the signified (*information highway <-> "autoroute de l'information"* in French), a phenomenon known as *calque* or *loan translation*[3]. This means that languages other than English have kept the same conceptual domains on which English based its metaphors. How can it be? It seems that the answer is to be found in the very nature of the Internet, i.e. movement, rapidity. The Internet developed so quickly that the linguistic terms used to refer to it had to follow this rhythm. Another explanation that could be put forward is that the English metaphors were quite clear, and were no impediment to the understanding of speakers of other languages if those expressions were literally translated, as they were based on more or less universal conceptual metaphors, as I will try to demonstrate below.

But we may wonder why there are so many metaphors to refer to the Internet. This is a very normal and frequent phenomenon, because no language, whatever its type, can do without metaphors, even technical languages, in which it has even been shown that metaphors are often more frequent. According to Thomas Kuhn (1996), the change in scientific paradigms leads to a change in the perception of reality – if such a concept exists – and what is metaphor, if not a way of comprehending, conceiving and maybe finally understanding reality? The profusion of metaphors dealing with the Internet seems symptomatic of its development; it has been demonstrated that metaphors often play a key role in scientific discoveries, first of all because

---

[3] It has to be noted that the special case of France and the impact of the French language policy have generally led to the use of *calques* or *loan translations* from English to French, and not to the use of mere loan words (i.e. English borrowings in the French language). Even if some English loan words do exist in French to refer to IT (*internet, web,* for example), common, everyday French speakers do not know their meanings in English, and some just ignore that the words have been borrowed from English, which is a proof of the quick assimilation and loss of motivation for those words.

they are a way of conceiving a new perception of reality, but also because they are a way of structuring this new perception, and therefore this new vision of reality. Metaphors can therefore be considered as a handy, useful way of constantly re-describing reality. Not only does the new perception give birth to metaphors but, quite paradoxically, the same metaphors give birth – cognitively speaking – to this new vision of reality that could not exist without words. Let us remember that the main role of metaphor for cognitive linguists is the conceptualization of a relatively abstract domain of experience through another relatively concrete domain of experience. This role is found in Internet metaphors, as I will try to show later. In other words, Internet metaphors are a way of structuring the way we think about the Internet, i.e. the way we perceive and conceive of it.

Yet, it is interesting to note that most Internet users are unaware of the metaphorical origins of some words and phrases found in the language of the Internet, i.e. they are unaware of the analogical link that generated them. This may seem weird because, as a general rule, metaphors need some time to lexicalize, and, consequently, speakers also need some time to lose the perception of the metaphorical origin. To understand why Internet metaphors are in fact catachreses[4], we need to look into the reasons why they are used. Let us start with a very basic example: *surf the web* / *"surfer"* / *"naviguer sur le web"*. What can be said about this example? First of all, the Internet developed so quickly that a terminological need was urgently felt, and quite naturally, people used a metaphorical denomination to refer to the Internet. Second, those expressions are not real metaphors – in the sense of *métaphore vive*, i.e. *newly-invented, original metaphor* if we follow Ricoeur (1975) – because they have been lexicalized quite immediately, as proved by the fact that they have been indexed in dictionaries[5]. As a consequence, the underlying implicit analogy which was the reason for their creation was not perceived by common Internet users. Indeed, when someone utters an expression such as *the information highway*, they do not visualize a real highway; when someone utters *surf the web*, they do not imagine themselves on a surfboard… The referents of the source domain are bypassed, which is generally the case when

---

[4] A catachresis is a metaphor used to fill in a linguistic gap, i.e. when there is no 'literal' expression (eg. *foot* of the mountain, bed *sheet*, etc.).

[5] This is definitely the case for Internet metaphors.

metaphors lexicalize quickly. A third remark we can make about Internet metaphors is that they are an excellent counter-example to the traditional definition of metaphor which is seen as a secondary, derived way of giving a name to reality. Indeed, as far as the Internet is concerned, it can only be designated metaphorically, as no literal expressions exist. The metaphorical name comes first, and makes up for the linguistic gap. I now want to compare the English definitions of *to surf* and the French definitions of "surfer" and "naviguer".

If we have a look at the English definitions of *to surf,* as a verb, in the 1989 and the 2006 versions of the *Oxford English Dictionary*, what can be observed?

In 1989:

> **1.** to form surf (*rare*)
>
> **2.** to go surf-riding, to surf-ride
>
> **3.** to ride (a boat) on the surf. To surf-ride at (a specified place).

In 2006:

> **1.** [no obj.] stand or lie on a surfboard and ride on the crest of a wave towards the shore: *he's learning to surf.*
>
> • [with obj.] ride (a wave) on a surfboard. • *(informal)* ride on the roof or outside of a fast-moving vehicle, typically a train, for excitement: *he fell to his death while surfing on a 70 mph train.*
>
> **2.** [with obj.] move from site to site on (the Internet): *the device allows you to surf the Net and send emails.*

The first thing that can be noticed is that the contemporary sense of *to surf the Internet* is not found in the 1989 version, but is recorded in the 2006 version. And not only is it recorded in the dictionary, but it is found in a sub-entry, which is proof of the lexicalisation of the metaphor which becomes a mere polysemous sense of the word. As it is sometimes the case with polysemy – more often than with shift of meaning – native speakers will perceive the two *signifieds* of the same *signifier* as not being linked. Now, is the same trend found in French? Let us have a look at the definitions found in the 1995 version of *Le Petit Robert* and in the 2007 electronic version. For "surfer" and "naviguer", the Internet-related meaning was not found in 1995, but was recorded in the 2007 version, under an independent sub-entry:

In 1995:

Surfer - v. intr

1. Faire du surf. ◊ <u>Fig.</u> *Surfer sur :* Se déplacer rapidement sur (qqch.) (cf. Survoler). *« Les femmes savent surfer sur les apparences »* (<u>Le Monde</u>, 1987).

In 2007:

Surfer - v. intr. • <u>1964</u>; <u>angl.</u> *to surf;* de *surf*

1. Faire du surf. ◊ <u>Fig.</u> *Surfer sur :* profiter d'un courant propice. *La marque a su « surfer sur l'effet de mode »* (<u>Libération</u>, 1997).

2. Se déplacer dans un réseau télématique grâce aux liens hypertextuels. Cf. <u>naviguer</u>. *Surfer sur Internet.*

It is worth noting that the French verb "surfer" was not found in the 1992 version of the same dictionary, even in its original sense.

In 1995:

Naviguer - v. intr.

1. (Bateaux et passagers) Se déplacer sur l'eau.

2. Voyager comme marin sur un bateau. *Ce mousse n'a pas encore navigué.*

3. Conduire, diriger la marche d'un bateau, d'un avion. *Apprendre à naviguer.*

4. <u>Fam</u>. Voyager, se déplacer beaucoup, souvent. *Il passe son temps à naviguer.*

In 2007:

Naviguer - v. intr. • <u>1392</u>; <u>lat.</u> *navigare*

1. Se déplacer sur l'eau, en parlant des navires et de leurs passagers. Cf. <u>voguer</u>. *Navire en état de naviguer; qui navigue sous pavillon panaméen.*

2. Voyager sur un navire, en tant que marin. *Ce mousse n'a pas encore navigué.*

3. Pratiquer l'art de la navigation ; conduire, diriger la marche d'un navire. *Naviguer à la boussole, au compas. Naviguer de <u>conserve</u>, bord à bord. « Ils naviguaient sur le bord du fleuve […] dégagés des remous »* (<u>Giono</u>). ◊ Diriger la marche d'un avion. *« Je navigue à sept cent cinquante mètres d'altitude »* (<u>Saint-Exupéry</u>).

4. Vieilli Conduire sa vie, ses activités. *Savoir naviguer :* être débrouillard. Loc. *Naviguer entre les écueils :* éviter habilement les obstacles, les dangers. *Naviguer dans les eaux de qqn.* Allus. littér. *Le char de l'État navigue sur un volcan.*

5. Fig. et fam. Voyager, se déplacer beaucoup, souvent. Cf. bourlinguer (cf. Rouler sa bosse). *« Ceux-ci n'avaient jamais navigué plus loin que le bout du canton »* (Alain-Fournier)*.*

6. Inform. Passer de manière non linéaire d'un document électronique, d'un site d'un réseau télématique à l'autre grâce aux liens hypertextes. *Naviguer sur la Toile.* Cf. surfer.

The fact that the metaphors are lexicalized is seen typographically, with the lack of quotation marks or inverted commas which, when used with a metaphor, very often indicate that the metaphor is a newly-invented, original one. In other words, quotation marks act as a signal indicating that the word or expression used is not the normal, usual way of expressing oneself, and they therefore act as what I would call *distance markers*. In the case of Internet metaphors, they are used without any quotation marks, because they are not perceived – or not perceived any longer – as metaphors.

Internet metaphors came to exist for terminological reasons, i.e. they emerged due to the urgent need to give a name to things that did not exist previously. In that case, metaphors can be considered as *linguistic spare tires* because, instead of inventing brand new words – which could have been created through suffixation, compounding, etc. – existing words have been used by generating metaphorical extensions of meaning. Another reason for choosing metaphors rather than any other word-formation processes may be a didactic one: the language of the Internet needs to be understood by everyone, even if the technical realities of the New Information and Communication Technologies are quite complex and technical. And it may be for this very reason that metaphors – instead of another word-formation process – have been chosen, as they have permitted speakers to immediately visualize the concept. Metaphors have been chosen for the sake of clarity and popularization. Internet metaphors therefore play a highly didactic role as they enabled common Internet users to refer to highly complex realities (HTML, ASP, PHP, etc.). I will thus hypothesize that one of the main roles played by Internet metaphors is a terminological one, which the instant lexicalization of those metaphors tends to prove. Yet, is the only reason for

choosing Internet metaphors the need to fill in the terminological gap? Why didn't people use compounding, which is a very frequent and economical word-formation process to refer to highly technical, abstract concepts (such as in medicine for instance)? Have Internet metaphors been chosen at random, i.e. arbitrarily, without any motivation? I do not think so. I have used the adverb *arbitrarily*, and it may ring a bell: the famous principle put forward by Swiss linguist Ferdinand de Saussure, according to which any linguistic sign is arbitrary, i.e. not motivated… Yet, whoever works on metaphorical language has to call this very principle into question, because metaphorical language seems an exception to the rules. As I intend to demonstrate in the following section, Internet metaphors have not been chosen randomly, as they are based on conceptual metaphors from which arbitrariness is excluded. Indeed, there is some motivation governing the choice of conceptual metaphors, and of linguistic metaphorical expressions. I would like to look at the most frequently used metaphors for the Internet, and show that there is one specific source domain which is used; I will try to explain why this source domain and not another is used to conceptualize the target domain of the Internet.

To do so, I decided to compile a corpus of metaphorical linguistic expressions related to the Internet, both in English and in French. Various databases and electronic glossaries on the web were therefore searched, such as http://www.olf.gouv.qc.ca/ressources/internet/ or http://www-rocq.inria.fr/qui/Philippe.Deschamp/CMTI/glossaire.html, as well as some dictionaries such as *The Oxford Dictionary English Dictionary* (*OED*), *Le Petit Robert de la Langue Française*, etc. Google's search engine – and particularly the *define tool* – has also been used to compile the corpus, and particularly the way Internet terms were defined. To decide which metaphorical expressions had to be analyzed, I consulted various glossaries of Internet terms, and noticed the recurrent use of metaphorical – at least originally – terms related to the sea, movement, and journey. I decided to compile my corpus around those three notions, being aware that other metaphors did exist to refer to the Internet, and that they could very well be taken as counterexamples to the general argument I now aim to develop in the third and in the fourth part of this paper.

3. Conceptual domains used to structure the language of the Internet

In these last two parts, I aim to analyze the linguistic metaphors used to conceptualize the Internet, and try and see what underlying conceptual metaphor(s) can be found. To do so, I will start by the definition of the word *Internet*, in English and in French. In English, the definition provided by *The Oxford Dictionary of English (2nd edition revised)* is:

> a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

In French, the definition that can be found in *Le Petit Robert de la Langue Française* is the following:

> Réseau mondial de réseaux télématiques utilisant le même protocole de communication cf. Le réseau des réseaux, la Toile.

Are these very 'technical' definitions found in those two best-selling dictionaries in keeping with the perception of the Internet by common, everyday users? Which source domain is used by common everyday Internet users to talk about the Internet?

Before answering this question, I would like to highlight that there are obvious differences between the metaphors used to refer to the computer, to office automation, and those used to refer to the Internet, at least in the beginning. I am saying "in the beginning", because I will attempt to demonstrate in the third part that the differences tend to vanish nowadays, as more and more people go online. What can first be noticed is that the metaphors used to refer to office automation have something in common: they all have a stasis element in them, because they almost all draw on the semantic field of the house, both in English and in French: *recycle bin/*"corbeille", *desktop/*"bureau", *mouse/*"souris", *clean up one's hard disk/*"faire le ménage sur son disque dur", *disk clean-up/*"nettoyage de disque", *mousepad/*"tapis *(*de souris*)*"… Yet, Internet metaphors, even if based on IT / computer science, and more specifically on office automation, are best defined by the notion of movement[6] or journey, as exemplified by the following French text:

---

[6] This is true not only about Internet metaphors, but also about the metaphors used to refer to various media, as shown by Settekorn (2001).

> on se *balade* ("have a walk") sur les *autoroutes* ("highways") de l'information grâce à un logiciel de *navigation* ("browsing" / "navigation" / "data surfing"); si un *pirate* informatique ("hacker"/"cracker") *s'introduit* ("gets into") dans votre système, vous courez le risque qu'un *virus* ("virus") ou un *vers* ("worm") ne *se propage* ("spread to") dans votre ordinateur, créant une réelle *épidémie virale* ("epidemic"), ou pire encore, un *cheval de Troie* ("Trojan horse") peut être introduit dans votre système et piller son contenu [...].

The same goes for English:

> we **surfed** on the Internet for ten hours yesterday; John **went to** a new website today; Do you want to **climb up** to the UCSC home page?; we waited for the information to **come to** me; we **went into** this thing called Yahoo; we couldn't **get back** to where we was; It **brought** me **to** the Anthropology page; (Maglio & Matlock 1998), or we **came back** to where we saw that picture.

This notion of *movement, motion, mobility* is certainly due to the fact that with a single click, you can move from one page to another, from one website in Malaysia to another in Denmark, from one universe to another, with no effort. I started to work on this subject in 2002 and at that time, I suggested that THE INTERNET IS A WALK[7] could be the conceptual metaphor structuring all the linguistic metaphorical expressions referring to the Internet, because a walk is something pleasant, easy... just like surfing on the web to visit a virtual library, a virtual museum, buy online, etc., without having to leave your home. The metaphors used to refer to the Internet therefore conceptualize the information found on the Internet as physical, real objects you grasp, not physically in this case, but by a more abstract movement (*clicking*), as Matlock et Maglio (1996) write:

> The data we collected suggest that people conceptualize information as physical objects located at particular points in space. These information objects can be manipulated, moved, and stored; for example, "we picked up that brain from David's web page and moved it over to mine".

---

[7] Maglio et Matlock (1998:7) suggest that the conceptual metaphor structuring Internet metaphors could be OBTAINING INFORMATION IS MOVING THROUGH SPACE, which is a quite useful and relevant conceptual metaphor, whose only drawback is that it can also be used to structure other domains than the Internet. Johansson (2006) suggests that the Internet conceptualisation results from a conceptual blend between /highway/ and /interpersonal communication/.

The second reason which could explain the subconscious choice of this conceptual metaphor is to be found in our bodily experience, calling for the notion of embodiment: to get something in real life, you generally need to move your body, or your mind… As for Internet metaphors, the main conceptual domain is that of travel, walking, etc., but that of the house is not totally absent, quite paradoxically because going online is very often synonymous with staying motionless in front of your computer screen… If there is a journey, the journey is purely virtual… This paradox was first noticed by Maglio and Matlock (1998:1) who highlighted the fact that common Internet users tend to perceive and conceive the Internet as a place in which they have to move to pick up some information, as the following definition of *cyberspace* highlights:

> The nebulous "place" where humans interact over computer networks. (http://www.k12.hi.us/~ehandboo/glossary.html)

Yet, the Internet is *not* a physical place (remember the definition found in the *OED*), and it is not the Internet user who moves to get the information, but the information that moves towards the Internet user. The various definitions of *cyberspace* you can find on the Internet are quite telling, as they all contain the notion of a *virtual* (fantasy; without regard to physical geography; virtual; artificial; constructed; mental; metaphysical; conceptual; non-physical) *location* (world; geography; place; environment; area; universe; space)[8]:

> - A term coined by William Gibson in his *fantasy novel* "Neuromancer" to describe the *"world"* of computers, and the society that gathers around them. (http://www.red.net/glossary/c.php)
>
> - The total interconnectedness of human beings through computers and telecommunication *without regard to physical geography*. (http://www.creotec.com/index.php)
>
> - Refers to a "*virtual meeting place*" of the electronic universe of information available through the Internet. http://www.iarchive.com/_library/terminology/c.html
>
> - A term coined by William Gibson in his novel Neuromancer. The word is currently used to describe the *virtual environment* of the Internet. (http://www.med.govt.nz/irdev/elcom/guide/guide-05.html)

---

[8] My emphasis.

- Any *area* beyond the realm of one's own computer to interact with other computer systems and/or people. (http://pershing-cib.ibanking-services.com/mellon/Internet_glosry_C.htm)

- The *universe* created by computer networks. (http://www.rainwater.com/glossary/c.html)

- An *artificial, virtual, constructed mental environment* or notional space developed using computers. The term is drawn from the nomenclature of William Gibson's speculative *fiction* novels. See also information highway, the Net, the Matrix. (http://teladesign.com/ma-thesis/glossary.html)

- a term used to describe the *area* where computer communications take place. (http://www.leprint.com/glossaries.html)

- the *virtual shared universe* of the world's computer networks, it has come to describe the global information space. As an example, telephone conversations, 'chatroom' discussions, computer communications and ATM transactions all take place in cyberspace. (http://www.unesco.org/education/educprog/lwf/doc/portfolio/definitions.htm)

- The *metaphysical environment* of the Internet. (http://www.nottinghill.biz/jargon.htm)

- A *conceptual universe* made up of the information available on and travelling through computer networks. (http://abc.net.au/-pipeline/radio/programs/gloss.htm)

- The *non-physical space* where interaction takes place between computer networks. (http://alt.uno.edu/glossary.html)

- Cyberspace is a *(virtual) reality* within the world's computers and computer networks. Cyberspace is a common theme in science fiction. (http://en.wikipedia.org/wiki/Cyberspace)

The definition of *cyberespace* in French is also in keeping with the findings for the English word *cyberspace*, as it also contains the notion of an "imaginary place":

Cyberespace : *Lieu imaginaire* (*imaginary place*) appliqué métaphoriquement au réseau Internet et dans lequel les internautes qui y naviguent s'adonnent à des activités diverses [9]. (http://www.granddictionnaire.com/)

---

[9] My emphasis.

If you take the very frequently-used word *website*, you will immediately realize that the Internet is conceived as a place, the word *site* being a topological term. The *Concise English Oxford Dictionary* gives the following definition of this word: „an area of ground on which something is located."

This perception is in keeping with our everyday life, our everyday actions, because when you desire something, the prototypical, usual way of getting it is by making either a physical move (for a concrete object) or a mental move (for an abstract object). The metaphors used to refer to the Internet are thus, as for many metaphors, based on our bodily experience. They seem to be structured on a prototypical spatial pattern, to refer to a virtual movement in a place. What conclusion can be drawn so far? First of all, that the model of the Internet as „a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols" (i.e. the definition from the *OED*, which corresponds to a technical model) is *not* the model the common everyday user goes by. The model is rather that of a place in or on which one moves to get information (even if, as mentioned before, it is not the Internet user who moves, but the information).

I would like to come back to the conceptual metaphor I mentioned, THE INTERNET IS A WALK, to try and improve it, because there seem to be some restrictions inside the semantic field of movement, and we need to figure out why. First of all, there are some restrictions because the entire source domain /movement/ or /walk/ is not projected onto the target domain /Internet/. Most metaphorical expressions used to refer to the Internet are indeed based on a specific movement/trip source domain, that of the sea, sea travel, more than that of movement in general, such as air travel or road travel, as we will see below. If we look at the following examples, we cannot but notice that the source domain which is mostly selected to structure and to refer metaphorically to the Internet is the maritime domain (sea travel), even if there is one expression which is based on road travel: the *information highway /* "autoroutes de l'information". Yet, this expression is not productive in contemporary French or contemporary English, because you don't **drive* on the Internet, you don't **speed* on the Internet, etc. (on ne **roule* pas sur Internet, on ne **conduit* pas sur Internet)… Another proof of the unproductiveness of this metaphor is the fact that it is not really used any longer, at least not as

frequently as at the onset of the Internet, but it is more and more replaced by another term, that of *information medium* in English and "support d'information" in French; I will come back to those expressions because I think they are emblematic of the change in the perception of the Internet by common, everyday users.

Now, we have to answer another question: Why was the source domain of the sea chosen to structure the target domain of the Internet? I make the hypothesis that the main reason lies in the vastness that is often associated with the sea, an attribute not found with highways, which appear more closed (we talk about the beginning and end of a highway, two terms we do not really use in association with the sea).

Let us have a look at the definition found in the *Oxford English Dictionary* (1989) for *sea*:

> The continuous body of salt water that covers the greater part of the earth's surface. Often *Poet.* with epithet as *broad, deep, large, salt, side, wide, wild*, etc.

This very notion of vastness is also found in the French definition of "mer" found in *Le Petit Robert*:

> *Vaste* étendue d'eau salée qui couvre une grande partie de la surface du globe.[10]

Le Petit Robert also gives a figurative meaning for "mer":

> **3.** <u>Fig.</u> Vaste étendue. *Mer de sable :* vaste désert de sable. *La mer de Glace :* grand glacier des Alpes françaises. *Quelques orangers « perdus dans cette mer de goudron et de béton »* (<u>Le Clézio</u>).
>
> ◊ Grande quantité (de ce qui est comparé à un liquide). *« Cette immersion violente dans une mer de mots »* (<u>Fromentin</u>)

I hypothesize that it is the perception of this notion of vastness which was used to conceptualize the Internet; yet, are there no other connotative features which were used to structure this domain? The sea also represents, at least in the collective unconscious, an almost magical place, a place to be discovered, a place which will keep its mystery, a place which is also potentially full of danger (remember the vision of the sea in *The Bible*). As a consequence, the onset of the Internet paved the way for an infinite path of discoveries, without

---

[10] My emphasis.

any limits, any boundaries, and the English language – and more particularly American English – used the source domain of the sea to structure it, maybe in relation to the first colonists who landed in America and discovered a vast space, an open land before them. No wonder therefore that the language of the Internet was influenced by the source domain of the sea. The French terms *cap de navigation*, *navigateur*, and *navigation*, purely maritime terms, seem to be proof of this. In French and in English, a lot of metaphors referring to the source domain of the sea can be found. Let us have a look at some words, in English and in French, followed by a short definition:

If we start with the verb which is the most frequently used, i.e. the verb **surf /** **"surfer"** (as well as "**naviguer**"), whose primary meaning referred to the sea, it is interesting to note that the verb *to surf* contains a notion of pleasure, as the verb is generally associated with leisure; French has the choice between "surfer" and "naviguer", the latter word referring rather to the usage of the Internet. Proof of the generalization and of the success of this term is the fact that many other terms have been derived from it, such as *egosurf, egosurfer, egosurfing*, etc. Below is the definition of *egosurf*:

> Egosurfing is looking to see how many places on the Web your name appears. On Alta Vista, you can also see how many times it appears in Usenet postings. On Google or Alta Vista and most other search engines, simply enter your name surrounded by double quotes in the search field like this: "Your Name" (http://whatis.techtarget.com/definition/0,,sid9_gci212040,00.html)

In French, one can note the frequent use of the verb ***débarquer*** ("get off a boat, a ship"), whose origin is also to be found in the source domain of the sea, as the *Petit Robert* dictionary notes:

> **Débarquer** – v. tr. : Faire sortir (des personnes, des choses) d'un navire, mettre à terre.
>
> v. intr. : Quitter un navire, descendre à terre.

Below are some examples in French:

> *L'annuaire inversé **débarque sur Internet** ; La pub TV **débarque sur Internet** ; Ce concept aurait donc été inventé par des hommes d'affaires qui ont un jour **débarqué sur Internet** sans rien y connaître ; Boulet Channel*

débarque sur Internet*.* (examples found on the Internet with a Google search: "débarque sur Internet" : 502 hits)[11].

- ***Pirate (informatique)*** ("hacker"): as already mentioned, the term also comes from the source domain of the sea.

- ***Stream(ing)*** (from *stream,* meaning "small river"):

Playing video or sound in real time as it is downloaded over the Internet. Data is decompressed and played (by use of a web browser plug-in) as it is transferred to your computer over the World Wide Web. Streaming requires a powerful computer and fast connection since the file is not stored on your computer. (http://www.tamu.edu/ode/glossary.html)

Other examples also refer to this notion of running water, river, stream, such as:

- ***(Haut) Débit*** (initially, the term refers to the rate of flow of a river). The English equivalent would be "broadband", and it does not seem to have any relation whatsoever with the source domain of the sea; yet, a relation can be found if we have a look at the first two meanings of *broad* found in the *Hachette-Oxford* dictionary:

Iwe adjective

1 (wide) [chest, face, grin, ribbon, ***river****,* street] large; to have a broad back literal, figurative avoir le dos large; to be broad in the hips être large de hanches; to grow broader s'élargir;

2 (extensive) [area, expanse, plain] ***vaste****;*

Once again, the two notions that are found are *river* and the notion of *vastness.*

- ***Data stream*** or ***flow*** (French "flux" or "flux de données")

- (aka *stream*) - All the data transmitted through a particular communication line for a particular program, operation or scheduled transmission. (http://www.itvdictionary.com/set-top_box.html)

- In telecommunications, a data stream is a sequence of digitally encoded signals used to represent information in transmission. (http://en.wikipedia.org/wiki/Data_stream)

- ***Gateway*** (French "**Passerelle écluse**", *footbridge*):

In telecommunications, the term gateway has the following meanings: *In a communications network, a network node equipped

---

[11] My emphasis.

for interfacing with another network that uses different protocols. *#A gateway may contain devices such as protocol translators, impedance matching devices, rate converters, fault isolators, or signal translators as necessary to provide system interoperability. It also requires the establishment of mutually acceptable administrative procedures between the two networks. (http://en.wikipedia.org/wiki/Gateway_(telecommunications))

- ***Island*** (French "**Îlot**") : n. m.

Local network working in multimode, linked to other local networks of similar type.

- ***Flood*** (French "**Inondation**" or "**raz-de-marée**"):

Computer hacking system consisting in flooding a server with thousands of simultaneous requests so as to overload it and lead to its breakdown.

In French, terms such as *Télécharger/gement vers l'amont / vers l'aval* can also be found, with *vers amont* meaning "upstream" and *vers l'aval* meaning "downstream", terms which once again refer to the source domain of the sea, of the river.

- ***Blog***: Blog is short for weblog.

A weblog is a journal (or newsletter) that is frequently updated and intended for general public consumption. Blogs generally represent the personality of the author or the Web site. (http://www.bytowninternet.com/glossary)

This word is a sort of blend of *web + log*, with a foreclipping of *web* and a compounding with *log*. *Log* originally refers – and still does – to a wood log that was used by people as a kind of notepad. Through an analogical, and more particularly through a metaphorical process, the word *log* or *log book* came to refer to the *diary* used by the captain on a boat. Once again, the source domain of the sea was used to structure the target domain of the Internet, as *web log* has become the normal way of referring to a *diary*, not only when out at sea, but on the Internet. This term gave birth to various derived terms in French as well as in English:

blogable, blogaddict, blogaddiction, blogalisation, blogcast, blogcastable, blogcaster, blogcasting, blogcrosser, blogcrossing, blogger, blogging community, bloggingsphere, bloggosphere, bloggospheric, etc.

(examples taken from www.granddictionnaire.com)

As far as web authoring and IT are concerned, other terms which have been borrowed from the source domain of the sea can be found, such as:

- *Anchor* **("ancre d'arrivée" / "ancre de départ"** in French).

In a HTML page content, an area which is the source or destination of a hypertext link. http://webmaster.lycos.co.uk/glossary/

Related terms: *tail anchor* (in French: "Point d'ancrage").

- *Workflow*:

Applications for networked computer systems which use the metaphor of a production line to model, manage and monitor clerical, administrative, and document-based tasks. (http://www.christlinks.com/glossary2.html)

- *Phishing*:

- is the act of tricking someone into giving them confidential information or tricking them into doing something that they normally wouldn't do or shouldn't do. For example: sending an e-mail to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft. (http://www.michigan.gov/cybersecurity/0,1607,7-217-34415---,00.html)

- Comes from the analogy that Internet scammers are using email bait to *fish* for passwords and financial data from the *sea* of Internet users. Since hackers have a tendency of replacing "f" with "ph", the term phishing was derived. The term has evolved over the years to include not only obtaining user account details but access to all personal and financial data. (http://www.wetstonetech.com/page/page/1972572.htm)

The main source domain used is still that of the sea, as in the following French example:

Sur l'Internet, Sylvie ne va pas seulement *à la pêche* aux infos : elle envoie des courriers, participe à des chats ou des forums… [borrowed from Johansson (2006:126)].[12]

French has other words such as *hameçonnage / appâtage (par courrier) / pêche au gogo / pêche aux informations confidentielles / pêche aux données personnelles.*

---

[12] A possible translation in English could be: On the Internet, Sylvie not only *angles for* information, but also sends emails, …

We find related terms in English, such as *email phishing / phishing scam / phishing spam / phisher / phish,* and in French: *courriel appât / d'hameçonnage / hameçon / hameçonnage / hameçonner / hameçonneur.*

> - **Audio bit stream / audio flow** ("flux audio") */* **data flow** ("flux de données") */* **video bit stream** or **video flow** ("flux vidéo"): once again, we can notice the use of purely maritime terms such as *flow* and *stream*; the term "flux" in French is also linked with the source domain of the sea as it refers to the flood tide.

4. A new perception of the Internet through its metaphors?

This notion of quick movement found at the very beginning of the Internet could be seen as a logical consequence of the euphoria that followed the emergence of the dotcom economy [13], and its subsequent failure. This movement seems to have slowly stabilized, just like Internet users, who are more and more *chasseurs* ("hunters"), and consequently, less and less *butineurs* ("gleaners"*)*, as they tend to use the Internet to look for specific information. I hypothesize that this new behavior is reflected in the new metaphors used to refer to the Internet, as they focus more on stasis than on movement, as was originally the case, as I tried to demonstrate in the third section, where the main source domain used was that of the sea. If the Internet remains a walk, a trip, a journey, it tends to become a planned trip, with what is called *cap de navigation* ("navigation course") in French, i.e. a more structured approach as the Internet tends to become a "*support* d'information" (information *medium*)[14]:

> On a Web site, a breadcrumb trail is a navigation tool that allows a user to see where the current page is in relation to the Web site's hierarchy. The term breadcrumb trail comes from the story of Hansel and Gretel, who left a trail of breadcrumbs as they walked through the forest so they could trace their way back *home*. (http://search-webservices.techtarget.com/sDefinition/0,,sid26_gci799408,00.html)

---

[13] Dot-com (also dotcom or redundantly dot.com) companies were the collection of start-up companies selling products or services using or somehow related to the Internet. They proliferated in the late 1990s dot-com boom, a speculative frenzy of investment in Internet and Internet-related technical stocks and enterprises. The name derives from the fact that many of them have the ".com" TLD suffix built into their company name. (http://en.wikipedia.org/wiki/Dot-com_bubble)

[14] This could remind us of the *breadcrumb trail* / "fil d'Ariane" often used on the newly-designed websites, which reminds the *cap de navigation* ("navigation course"), as well as the compass used at sea.

It is interesting to note that the very last word used in the definition is *home*, a term linked to office automation at first, but not to the Internet. As the usages of Internet users tend to stabilize – as shown by the new recurrent usages of Internet users: online banking, weather forecast, yellow pages, online dating sites, etc. – the vocabulary used to refer to the Internet also tends to stabilize, which can be seen in the more and more frequent use of the already mentioned French term *support d'information* ("information medium"), and the quasi exclusive metaphorical use of the preposition *on*/"sur" to refer to the Internet: *go **on** (to) the Internet / go **on**line /* "aller **sur** Internet", *surf **on** the Internet /* "surfer **sur** Internet", *be **on** msn /* "être **sur** msn", *publish something **on** one's blog /*" le mettre **sur** son blog", etc. Visual proof of this is to be found in the change of the logo used by Netscape Navigator: the Internet browser which was very famous in the mid 1990s[15] used a compass as its logo, again a maritime symbol. Today, Netscape's logo is an image of the earth, a logo which retains the notion of vastness, but does not exclusively refer to the source domain of the sea.

If the Internet remains an open, virtual world, with no limit, it has nevertheless become a work tool like any other, and it is not surprising that people can nowadays do on the Internet basically all the things they do in 'real' everyday life and, as the New Zealand TV ad says, „broadband has changed the way we do so many things": how we go shopping, find music, order dinner, bank, write to friends, send CVs, talk to our friends, participate in auctions, trade (e-commerce), consult libraries' databases, use e-learning to put documents on the Internet for students, etc. and even try to find our soul mate, as the boom in online dating sites reveals. All these examples tend to show that the Internet, which I have previously opposed to 'real' life has become, in a way, part and parcel of 'real' life; the note added to the definition of *cyberespace* in granddictionnaire.com is quite telling:

> Note(s) : Ainsi, les internautes circulent dans le cyberespace pour s'informer, discuter, s'amuser, faire du lèche-vitrines, flâner et parfois même pour commettre un délit, *comme dans le monde réel.* ("as in real life") Le cyberespace est un environnement humain et

---

[15] In 1997, Netscape Navigator's market share was 72%, while Internet Explorer's market share was only… 18%.

technologique qui est le siège d'événements ayant des conséquences juridiques[16].

The same goes for the definition found for *cyberspace* in (should we say "on"?) *Wikipedia,* where the term *virtual* is between brackets:

> Cyberspace is a (virtual) *reality* within the world's computers and computer networks. Cyberspace is a common theme in science fiction[17]. (http://en.wikipedia.org/wiki/Cyberspace)

This idyllic vision of the Internet, where you can basically do everything you would do in real life, without having to leave your home, also has downsides: If the Internet is more and more like everyday life, naturally you are bound to find all the problems and dangers found in real life, such as prostitution, paedophilia, cyber-terrorism, etc. In cognitive linguistics, researchers such as Lakoff & Johnson showed that the conceptual metaphor LIFE IS A JOURNEY was used to structure our everyday life (together with others such as LOVE IS A JOURNEY):

> *we'll have to **go our separate ways**, we're **at a crossroads**, we can't **turn back now**, our relationship is **going nowhere**, we're **stuck**, this relationship is **a dead-end street**, it's **a long, bumpy road**, our marriage is **on the rocks**, we've **gotten off the track**, we're just **spinning our wheels**, look **how far we've come***, etc.

As the Internet has become an integral part of our contemporary way of life and a real information medium, there is no reason why this conceptual metaphor could not be used for the Internet, which recalls the conceptual metaphor we suggested some years ago: THE INTERNET IS A WALK, which could very well be changed today to THE INTERNET IS A JOURNEY.

There consequently seems to be a two-way influence: first of all, the language of IT, and more particularly of office automation has an effect on the language of the Internet. But secondly, the language of the Internet also has a significant effect on the language of office automation, as more and more application programs are made and designed following Internet browsing principles. As an example, I will mention Internet browsers, such as *Firefox,* which more and more often use the vocabulary used to refer to home automation: if *Internet Explorer* still uses the term *favorites /* "favoris" in English, it is not the case for

---

[16] My emphasis.

[17] My emphasis.

Firefox which uses the term *bookmark* / "marque-pages" (literal translation of *bookmark*). This reminds me of the very term *web browsers,* with the verb *to browse through something* which was initially used to refer to books. But what is more striking is the fact that nowadays it is the vocabulary used to refer to office automation which borrows from the language of the Internet. According to the latest surveys, people mostly use the Internet to surf the web to look for specific information, and then to send emails, which was the opposite a few years ago. We can also notice the boom in the number of blogs (the most striking example being the blogs used by politicians or the use of YouTube by Tony Blair or Barack Obama for example). As more and more people go online and get used to and adopt the Internet browsing 'reflexes', people designing application programs take this fact into account and design software more and more as web designers do when they design websites. I am convinced that the vocabulary used by the new application programs will borrow more and more frequently from the vocabulary of Internet browsing. Finally, I would like to draw a parallel between the economic stabilisation of Internet-related jobs and the stabilisation of usages, two trends which are reflected in the stabilisation of the vocabulary used to refer to the Internet, and essentially in the metaphors used.

5. Conclusion

The main objective of this paper was to try and demonstrate that Internet metaphors were not chosen arbitrarily but were partly motivated by the perception that common, everyday Internet users had of the Internet. The source domain mostly used to structure the target domain of the Internet was originally that of the sea. We are at a turning point as Internet usages have stabilized and, consequently, the vocabulary used to refer to office automation influences more and more the vocabulary used to refer to the Internet. More significantly, there is also an influence of the vocabulary of the Internet on office automation. In conclusion, I would like to highlight the fact that if Internet metaphors have largely been motivated by the perception of Internet users, there is also a reciprocal influence because Internet metaphors also structure our very perception of it, which is in keeping with the mutual relationship between language and thought.

Needless to say that the subject of how metaphors used in English and in French help conceptualize the abstract domain of the Internet has just been broached in this paper, and has essentially been accounted for by one metaphorical model, the Conceptual Metaphor Theory. It may be interesting to broaden the scope of this study by resorting to other metaphorical models, such as Blending Theory, and by using large corpora of English and French to see if counterexamples may be found. Those counterexamples would therefore prove that it is either unlikely that Internet metaphors can be accounted for exclusively by one conceptual metaphor, or that the perception of the Internet has changed one more time.

References

Coblentz, Clayton (1997): „Metaphorically interactive: the rhetorical examination of World Wide Web pages": http://www.regent.edu/acad/schcom/rojc/coblentz/coblentz.html [accessed 14.7.2010].

Coulson, Seana, & Matlock, Teenie (2001): „Metaphor and the space structuring model", in: *Metaphor & Symbol, 16*, 295-316: http://cogsci.ucsd.edu/~coulson/ssm.htm [accessed 14.7.2010].

English, Kathryn (1997): *Une place pour la métaphore dans la théorie de la terminologie : les télécommunications en anglais et en français,* thèse de doctorat nouveau régime, 2 volumes, Université de Paris XIII.

Jamet, Denis (2002): „Les métaphores d'Internet", in: *L'ALEPH – Philosophies, Arts, Littératures,* n°9 'Mise au Net', Lyon, 34-39, http://www.metaphorik.de/ausaetze/jamet-Internet.htm [accessed 14.7.2010].

Johansson, Conrad (2006): *Surfer sur Internet,* Thèse en langues romanes pour le doctorat ès lettres, Université Uppsala.

Kuhn, Thomas S. (1996): *The Structure of Scientific Revolutions,* The University of Chicago Press, Chicago.

Lakoff, George & Johnson, Mark (1980): *Metaphors We Live By,* The University of Chicago Press, Chicago.

Lawler, John: „Metaphor we compute by", Lecture to the Informational Technology Division of the University of Michigan. Available at: http://www.lsa.umich.edu/ling/jlawler/meta4compute.html [accessed 14.7.2010]

Maglio, Paul P. & Matlock, Teenie (1996): „Apparent motion on the World Wide Web", in: *Proceedings of the Eighteenth Annual Conference of the Cognitive Science Society.* Mahwah, NJ: Erlbaum: http://www.alamden.ibm.com/cs/people/pmaglio/pubs/wwwmotion .ps [accessed 14.7.2010]

Maglio, Paul P. & Matlock, Teenie (1998): „Metaphor we surf the web by", in: *Workshop on Personal and Social Navigation in Information Space*, Stockholm, Sweden: http://www-psych.stanford.edu/~tmatlock/pubs.html [accessed 14.7.2010]

Palmquist, Ruth A. (1996): „The Search for an Internet Metaphor: A Comparison of Literatures", *Asis 1996 Annual Conference Proceedings*, October 19 – 24, 1996. http://www.asis.org/annual-96/Electronic-Proceedings/palmquist.html [accessed 14.7.2010]

Ratzan, Lee (2000): „Making sense of the Web: a metaphorical approach", in: *Information Research*, 6(1): http://InformationR.net/ir/6-1/paper85.html [accessed 14.7.2010]

Ricoeur, Paul (1975; 1997): *La métaphore vive*, Paris, 'Essais', Points.

Rohrer, Tim (1995): „Metaphor we compute by: bringing magic into interface design": http://philosophy.uoregon.edu/metaphor/gui4web.htm [accessed 14.7.2010]

Rohrer, Tim (1997): „Conceptual Blending on the Information Highway: How do metaphorical inferences work?", in: *Discourse and Perspective In Cognitive Linguistics*, edited by Wolf-Andreas Liebert, Gisela Redeker and Linda Waugh. Amsterdam: John Benjamins, 185-205: http://philosophy.uoregon.edu/metaphor/iclacnf4.htm [accessed 14.7.2010]

Schlanger, Judith (1971): *Les métaphores de l'organisme*. Bibliothèque d'histoire de la philosophie, Librairie philosophique J. Vrin, Paris.

Settekorn, Wolfgang (2001), „Media and Metaphor: The Case of Virtual Wandering and Stationary Movement", in: *metaphorik.de* 1, 87-100 [http://www.metaphorik.de/01/settekorn.pdf] [accessed 26.7.2010]

Sweetser, Eve E. (1990): *From Etymology to Pragmatics. Metaphorical and Cultural Aspects of Semantic Structure*, Cambridge Studies in Linguistics #54, Cambridge, Cambridge University Press.

Dictionaries & Glossaries

Le Petit Robert de la Langue Française, electronic version.

Grand dictionnaire terminologique: http://www.granddictionnaire.com

Wikipedia: http://en.wikipedia.org

Origin of some IT terms by Alain Rey: http://livres.tele-rama.fr/edito.asp?art_airs=WEB1002105&srub=1

Internet Glossaries of information and communication technologies:

http://www.mines.inpl-nancy.fr/~tisseran/cours/glossaire/glossaire.html

http://www.olf.gouv.qc.ca/ressources/internet/index/index.htm

http://www-rocq.inria.fr/qui/Philippe.Deschamp/CMTI/glossaire.html

Wikipedia: http://en.wikipedia.org