

Pragmatics, Pain and Forms of Life. Philosophical Investigations on Chronic Pain Francesco Galofaro

Esercizi Filosofici 6, 2011, pp. 266-280

ISSN 1970-0164

Link: http://www2.units.it/eserfilo/art611/galofaro611.pdf

PRAGMATICS, PAIN AND FORMS OF LIFE. PHILOSOPHICAL INVESTIGATIONS ON CHRONIC PAIN

Francesco Galofaro

This paper is an outline of a research on communication and chronic pain. I achieved it thanks to the cooperation between ISAL foundation against pain and the Centre of Ethnosemiotics at Bologna University (CUBE). I will particularly focus on some epistemological and semiotic problems I solved thanks to the pages Wittgenstein dedicated to the relationship between language and pain, both in his *Philosophical Investigations* (Wittgenstein 1958) as well as in his *Notes for Lectures On Private Experience and Sense Data* (Wittgenstein 1968).

The link between language and pain is well documented in anthropology, starting from the seminal work by Lévi-Strauss (1958), without forgetting to mention the studies carried out by Byron Good (1994) and Le Breton (1995). Nevertheless, Wittgenstein's point of view is useful to make our ideas clearer: in particular, he states that the word «pain» is not the sign of an object, considered as a private sensation. As an «object», pain should be independent from the subject who feels pain – but it is not: pain cannot be shown or proved. At the same time, as a *private* sensation, it would be not understandable by other people; but indeed it is. So expressions like «private object», «experience», and so on, lead to a paradox of sort. Wittgenstein suggests that the verbal expression of pain is better described as *behaviour*: this behaviour is part of pain.

Wittgenstein's argument on pain should be considered in the general context of his criticism toward psychology. Nevertheless, he describes some real problems, which people face when they must cope with chronic pain.

1. The Standard Model: Lacks

According to the standard model in diagnosis, pain is considered a symptom. Medical knowledge links the symptom to its cause. The meaning of the word «cause» here is restricted: «cause» is something that has to be removed in order to obtain the remission of the symptom.

Let us compare this sketch of diagnosis with two definitions of «sign» by Charles S. Peirce: «a sign, or representamen, is something, which stands to somebody for something in some respect or capacity» (CP 2.228). «I define a Sign as anything which is so determined by something else, called its Object,

and so determines an effect upon a person, which effect I call its Interpretant, that the latter is thereby mediately determined by the former» (SS 80-81). In the relationship constituted by the sign, its object, and the interpretant, we recognize respectively the symptom, its cause, and the judgment of the doctor – see fig. 1.

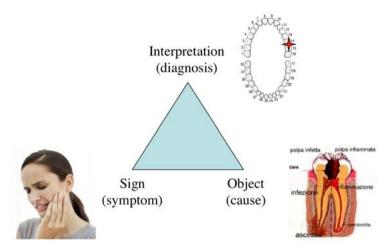


Fig.1 – A Semiotic Model for Diagnosis.

According to Eco (1976) the so-called object is always the *content* of a hypothesis made by the doctor. This way Eco tries to merge Peirce's definition of sign with the structural tradition. In particular, he refers to Hjelmslev's distinction in a semiotic process between an expression plan and a content one, which reprises and generalizes the Saussurean difference between signifier and signified (cf. Hjelmslev 1961). The hypothesis about the content of a symptom is related to scientific metalanguage as we can find it in medical texts:

Caries is tooth decay, commonly called cavities. The symptoms – tender, painful teeth – appear late. Diagnosis is based on inspection, probing of the enamel surface with a fine metal instrument, and dental *x*-rays. Treatment involves removing affected tooth structure and restoring it with various materials. (Beers 2006)

So a doctor has to *learn* how to recognize that «there is something» thanks to a code motivated by previous experiences; then he can infer what this thing could be. Diagnosis consists of these two steps (Galofaro 2007: 40-41). The model can be represented as in fig. 2:

Metalingustic	Expression Plan 1	Content Plan 1	
assertion:	Medical definition	A relation between:	
Medical		Expression Plan	Content plan 2:
Signs:		2: Symptom	Inferred Cause

Fig.2 – A Semiotic Model of Diagnosis According to Eco (1976).

This leads us to further problems with the standard model. What could we say about chronic pain? As a matter of fact, in this case diagnosis is difficult: the cause of chronic pain is often unclear. Its removal does not stop the pain. At these conditions, therapy cannot be resolutive: often it does not assure anything more than a temporary ceasefire. Let us consider neuropathic pain (fig. 3):

Neuropathic pain results from damage to or dysfunction of the peripheral or central nervous system, rather than stimulation of pain receptors. Diagnosis is suggested by pain out of proportion to tissue injury, dysesthesia (e.g., burning, tingling), and signs of nerve injury detected during neurologic examination. Although neuropathic pain responds to opioids, treatment is often with adjuvant drugs. (Beers 2006)

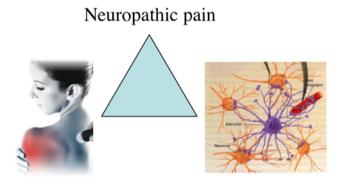


Fig. 3. – Schema of Neuropathic Pain from a Semiotic Point of View.

At the present, the damage to the nervous system cannot be removed. Furthermore, this «damage» is still unclear: in a number of pain syndromes Milligan and Watkins (2009), found an anomalous behaviour of the glial cells that modulate pain processing. This suggests new therapeutic strategies: nowadays drugs exclusively target neuronal cells. And yet, new drugs will not «fix» the damage. At the given conditions, chronic pain could be considered as a sort of useless symptom. And this is exactly the way in which chronic pain is

perceived in the patient's experience. Is the patient condemned to a pointless pain?

2. Patient's Point of View on Chronic Pain

The model proposed by Eco introduces a new factor into the equation: language. Language plays a role in linking the symptom with its diagnostic content. Nevertheless, the semiotic model of medical language is not necessarily a model for the way in which ordinary language refers to pain. Furthermore, our culture has well introjected the medical point of view on pain as an alarm for a certain disease. But, in the case of chronic pain, medical language fails to provide such a link between the symptom and a removable cause. As a consequence of this, as we already mentioned, patients are prisoners of a literally meaningless pain. For example, let us compare the medical definition of fibromyalgia to the patient's deposition:

Fibromyalgia is a common nonarticular disorder of unknown cause characterized by generalized aching (sometimes severe), widespread tenderness of muscles, areas around tendon insertions, and adjacent soft tissues, as well as muscle stiffness, fatigue and poor sleep. Diagnosis is clinical. Treatment includes exercise, local heat, stress management, drugs to improve sleep, and analgesics. (Beers 2006)

Notice how in this definition metalanguage fails to connect the symptoms to a particular cause. The consequence is that therapy is not resolutive. As much as concerns the point of view of the patient:¹

Patient F41: Suddenly at night I woke up practically paralyzed. I could not move or get out of bed. I started a pilgrimage among neurosurgeons, orthopaedists and neurologists. In spite of the cortisone, muscle relaxants and painkillers the pain has never waned. Even an arm began to hurt, especially at night, then the other one and the neck and legs as well. The neurologist defines me a healthy person with some contracture, who has to change character: basically a crazy woman who amplifies the pain because she is mental! Besides the pain, I even had to suffer the humiliation of being considered a whiner or a mythomaniac. The last rheumatologist diagnosed me with fibromyalgia. There is no real cure and you have to live with it. Since July my life completely changed: I can't do anything at home, the nights are a torture and during the day I go to work, pale and tired like a zombie. Sometimes I think it doesn't worth living this way. All the people around you get tired of this whining and you smile even when you don't

¹ All depositions have been translated by me.

want to. What I really hate is that sometimes I'm very sick, even walking becomes a struggle, it's hard to concentrate, and I've to bear with the people who call me a hypochondriac.

What really hurts is that no one understands me; only those who feel this pain know what I'm talking about. This is more or less the story of my last nine months in a hell where you never see the light at the end of the tunnel. I'm not depressed, but a continuous pain leads to depression. I no longer want to wear makeup, nor do I want to do shopping. I'm just fine at home. I'm a bit detached from reality: I see other people like characters in a play.

Some elements of this story are structural in the narration of all patients suffering of chronic pain: (i) difficulties in obtaining a correct diagnosis; (ii) the suspicion of a psychiatric disorder; (iii) derealization in connection with a meaningless pain; (iv) others' failure to understand chronic pain; (v) solipsistic tendencies.

3. The Word «Pain»

The difficulties in narrating the experience of chronic pain are real. Patients have to learn how to talk about the meaning of their pain and they have to search for it outside medicine.

If compared to medical definitions, the word «pain» is usually used in a vague sense. Patients don't try to define it more precisely. A strategy to identify the denotation of the word «pain», could be considering it as a symbol that abbreviates a description (Russell 1905). This description could be definite or not. What could be the exact form of the definition? Let's look at some possibilities:

(1) There is an x and this x is chronically painful

We saw how in the case of chronic pain this is simply untrue. There is no x that can be removed, thus ceasing to cause pain. In regards to other attempts to define pain, I'm afraid that they sound somehow ludicrous:

- (2) There are some «x», and these «x» are pain
- (3) There is one x and this x has the characteristic of painfulness

Reading descriptions like (2) and (3) we learn that the word «pain» means there's pain. Although their form is slightly different, they sound like Tarskian sentences: they are not strictly truisms, but they seem trivial. Naturally, under the same circumstances in which people accepts that there is pain, they would accept even that the word pain means that pain is present. Perhaps Tarskian strategy can work in order to define truth, but, in my opinion, we can't use this

expedient in order to specify the meaning of a term: it remains definitively vague. From the standpoint of these definitions, we don't learn how to use the defined term, or how to identify pain. Vague descriptions are not informative (cf. fig. 4), nor helpful in understanding the real meaning of pain, first of all from patients' point of view.



Fig. 4 – Vagueness and Descriptions.

We experience the same troubles when considering «pain» as a name rigidly designating an object in every possible case (Kripke 1980): even in that case we need to specify some other properties of pain in order to clearly identify its object.

I have also tried a different strategy, and I asked patients to define the word «pain» in their terms, or to suggest a different name for chronic pain – a procedure that Wittgenstein would consider meaningless (cf. 1993: 205). In fact, I obtained answers like these:

Patient F41: Pain doesn't have a particular name. It happens, and you read it in the eyes or in the cries that subconsciously emerge from your mouth. Pain: there are no other names.

Patient M5: Honestly, I never thought to change name of pain. On the contrary, it's fundamental to name your own disease, and it's not so simple as one could think. As a matter of fact, by naming your disease, it becomes possible to manage your illness, to accept it and live with your pain.

Patient F42: Today is one of those days in which physical pain is — let me say it – «semi-chronic». Sometimes it takes a break; sometimes it makes its

voice heard in a big way, involving all senses. I try to take my mind off it, but my efforts are useless, today. Without any certainty, there's vagueness...

Patients tend to describe just some idiosyncratic features of their pain. Evidently these peculiarities mark their lives. Paradoxically, contingent properties are much more important than those characteristics that chronic pain has to present necessarily in order to be logically and scientifically defined. All contingent properties can be part of an encyclopaedic representation of pain (cf. Eco 1986), but they are not useful in identifying a common object. Perhaps, before asking how the word «pain» denotes something, we have to answer the question: what if the word «pain» does not denote anything in particular?

4. Wittgenstein's Pain

In order to solve the problem, I consulted Wittgenstein writings about pain (1958; 1993²). The latter text consists of lesson notes prepared by Wittgenstein in 1935 at Trinity College. According to Monk (1990, ch. 17) at the time, Wittgenstein was considering whether to study medicine in Dublin, once his fellowship expired. This way he would have then joined his friend Francis Skinner. This provides a second possible interpretation of the reason behind his interest in pain, the first being a criticism of psychology. Wittgenstein dismissed many of his own philosophical opinions during his lifetime. Nevertheless, he maintained the conviction that many statements made by psychology are nonsensical and superficial – cf. Wittgenstein (1922, 5.5421).

After the lectures Wittgenstein went to Norway in order to edit his notes for publication. During that time he wrote the paragraphs 1-188 of his *Philosophical Investigations*. The source of these paragraphs is the Brown Book: Wittgenstein leaves his notes on the subject of pain in his notebook until 1944, when he moves to Swansea and joins his student, Rush Rhees (cf. Monk, 1990, ch. 22). Wittgenstein was searching for an interlocutor on philosophy, and Rhees had attended Wittgenstein's lectures on private experience in 1936.

I could summarize Wittgenstein's considerations on the word «pain» by saying that it seems to refer to something invisible, intangible, that no one can feel in my place or share it with me, an unverifiable pain which never occurs in the same manner:

² The first edition of Wittgenstein's «Notes for Lectures On Private Experience and Sense Data» (1968) was edited by his student Rush Rhees and is largely incomplete. Some of the quotations I used are not present. They are reported in the edition by David Stern (Wittgenstein 1993). I also checked their effective presence in the manuscripts starting from Ms-148 (cf. http://wittgensteinsource.org/).

It is the substantive «pain» which puzzles us. This substantive seems to produce an illusion. What would things look like if we expressed pains by moaning and holding the painful spot? Or that we utter the word pain pointing to a spot. «But the point is that we should say "pain" when there really is pain.» But how am *I* to know if there really is pain? If what I feel really is pain? Or if I really have a feeling? (Wittgenstein 1993: 206)

Wittgenstein's statements on pain are not just a dispute with psychology: they refer to meaning in general:

- 358. But isn't it our *meaning* it that gives sense to the sentence? (And here, of course, belongs the fact that one cannot mean a senseless series of words.) And «meaning it» is something in the sphere of the mind. But it is also something private! It is the intangible *something;* only comparable to consciousness itself. How could this seem ludicrous? It is, as it were, a dream of our language. (Wittgenstein 1956: 113)
- 362. Rather it seems to us as though in this case the instructor imparted the meaning to the pupil without telling him it directly; but in the end the pupil is brought to the point of giving himself the correct ostensive definition. And this is where our illusion is. (Wittgenstein 1956: 113)

The most general frame of reference for Wittgenstein's reflections about the meaning of the word pain is the criticism against a philosophical position, which identifies the meaning of words with objects and the meaning of propositions as connections between objects:

2. That philosophical concept of meaning has its place in a primitive idea of the way language functions. But one can also say that it is the idea of a language more primitive than ours. (Wittgenstein 1956: 3)

In Wittgenstein's opinion, this has been a source of philosophical confusion. As a Semiotician, I agree with Wittgenstein on the real relevance of «objects» in semantics. Nevertheless, this is not the aim of this essay. In the large mass of fragments Wittgenstein left about pain, I search for clues to solve the problem of chronic pain. If pain is not a sign for its own cause, then what sort of thing can be considered? The answer could arise from an inquiry about the real meaning of the word «pain». Accordingly, I decided to compare some of Wittgenstein's statements about pain with the stories my patients wrote about their painful experience. The relationships between the two are impressive. According to Monk (1990, ch. 17), Wittgenstein imagined possible therapeutic applications of his *language games*. He was somehow influenced by Freud's results. I'm thinking along the same lines: perhaps the Wittgenstein method could help patients suffering from chronic pain to reflect on the nature of a disease which they consider pointless.

5. Analysis

Let's return to Wittgenstein's starting point. How am *I* to know if there truly is pain? Wittgenstein (1993: 254) states that not believing the expression of pain is irrational:

It is nonsense to say: the expression may always lie. The language games with expressions of feelings (private experiences) are based on games with expressions of which we don't say that they may lie. (Wittgenstein 1993: 245)

This seems rather counterfactual: after all, if law punishes the simulation of pain, then some simulators must exist. Wittgenstein's answer is:

In fact I could teach it to lie, as a separate language game. (Wittgenstein 1993: 254)

Wittgenstein did not ever change his mind:

249. [...] Lying is a language-game that needs to be learned like any other one. (Wittgenstein 1956: 114)

Unfortunately, the experience of not being believed is typical in patient's stories. Family, friends, colleagues, often grow tired and skeptical on hearing about chronic pain:

Patient F21: What I remember with great sadness is when I went dinner at my parents': because of arthritis my right hand was swollen and sore: I had to use my left. I remember my mother wanted to help me but I told her: «I'll eat slowly. I learnt to use the other hand». Unfortunately my ignorant father said: «put your hand on the table». I could not even open it. I do not understand yet why he did that gesture: suddenly, with his hand he pressed mine and I began to scream in pain. Maybe he wanted to understand if this pain really exists.

If we think the meaning of pain is an object, then it is an object of a strange genre. If John and Laura hear some music in a concert hall, they share something: the musical soundwaves travel the world. What happens when John and Laura feel pain? In this case there's nothing to share. Each person has his own pain, and they can't even be sure that the two pains are comparable. That's why Wittgenstein says:

The usual game played with the word «toothache» involves the distinction of bodies which have the toothache. (Wittgenstein 1993: 227)

This position often leads patients suffering from chronic pain to a traditional enemy of Wittgenstein: solipsism. Both in Wittgenstein's notes and in the *Philosophical Investigations* we find an attempt to specify the condition at which we can speak of «the same» pain:

253. «Another person can't have my pains.» – Which are *my* pains? What counts as a criterion of identity here? Consider what makes it possible in the case of physical objects to speak of «two exactly the same», for example, to say «This chair is not the one you saw here yesterday, but is exactly the same as it».

In so far as it makes *sense* to say that my pain is the same as his, it is also possible for us both to have the same pain. (Wittgenstein 1956: 191)

One of the best insurances against solipsism is the fact we express pain in situations involving other people:

Does the solipsist also say that only he can play chess? (Wittgenstein 1993: 227)

Is this joke showing an unusually humoristic side of Wittgenstein? Nevertheless, our society demonstrates in many ways its scepticism toward chronic pain. As a matter of fact, the impossibility of proving that my pain is real, leads both to a legal and a political problem: in Italy these patients do not have the right to any invalidity pension, because there is no smoking gun – there are no exams which may determine that my pain is real:

Patient M5 – In Italy there are three hundred thousand people with CFS, «Chronic Fatigue Syndrome» a very debilitating disease, recognized by WHO, other European and American countries, but alas, not in Italy. Therefore, these people who fight over every day with the pain of their disease, the inability to lead a normal life and not being able to work, are in the position of having to seek help from friends or family members to survive. With great difficulty, in the absence of welfare assistance, People are forced to pay all the necessary care in order to get better. Those people have, despite of their disease, an incredible energy, fighting for their right to health. Before getting sick, these people worked and paid taxes to the Italian State.

A problem related to pain is its manifestation through behaviour. As we will see, this is an important element in Wittgenstein's solution to our problem. But chronic pain often leads patients to avoid manifesting it. Without a sign that proves that patients' pain is real, the risk is disbelief. Let's read what Wittgenstein wrote on this point:

So-and-so has excellent health, he never had to go to the dentist, never complained about toothache; but as toothache is a private experience, we can't know whether he hasn't had terrible toothache all his life. (Wittgenstein 1993: 239)

This is a different language game, called a game of assumption by Wittgenstein.³ And the proof is:

But can't I just assume with some degree of certainty that he has pain although I have no reason whatever for it? I can say «I assume. . ., » but if I sent them all to the doctor although they showed no sign of illness /pain/, I should just be called mad. (Wittgenstein 1993: 241)

Patients confirm this point:

Patient F43 – In my opinion pain is a very personal feeling. People do not give enough importance to a fact: pain shows that not everything is visible to the eye. When the pain I feel is very strong and I complain, there is always someone who has more pain than me, so I think I have to shut up and continue to endure. I still take my pills, even now that they don't work, and I continue to do my work as if nothing had happened. But when the pain comes from, for example, a dislocation that makes you limp, in that case the pain is visible, and people offer sympathetic glances.

When Wittgenstein denies that the word «pain» has an object, he seems to be denying that pain exists. Obviously he does not mean this. He is denying that pain is a «private experience», because the verbal expression «private experience» is meaningless.

The «private experience» is a degenerate construction of our grammar (comparable in a sense to tautology and contradiction). And this grammatical monster now fools us; when we wish to do away with it, it seems as though we denied the existence of an experience, say, toothache. (Wittgenstein 1993: 283)

So strong is our language that it gives the impression of referring to an object. It is an illusion deriving from the form of sentences like $\ll x$ has $y\gg$. We can prove it by using a different verbal construction:

I don't just say «I've got toothache,» but toothache makes me say this. (I deliberately didn't write «the feeling of toothache», or «a certain feeling.»). (Wittgenstein 1993: 283)

³ In *Philosophical Inquiries* (1956: 103; §§ 310-311) Wittgenstein returns on the problem of exhibiting pain in relation to the different possible assumptions of the hearer.

As a matter of fact in many descriptions pain is not portrayed as an object, but as an extraneous agent. There is a strong link between Wittgenstein's position and structural semantics: reference is just an illusion produced by language:

Referential illusion can be defined as the result of a set of procedures put in place to produce the meaning effect of «reality». (Greimas and Courtés 1979: 148)

In any case, Wittgenstein is not trying to demonstrate that pain does not exist:

The pain seems to be the atmosphere in which the expression exists. (The pain seems to be a circumstance.). (Wittgenstein 1993: 282)

What he is trying to say is that the verbal expression of pain is similar to moaning: behaviour. It is a language game with its own particular rules. Some of these are social rules. In certain circumstances it is socially forbidden to express pain, as we can see in the words of a patient:

Patient M5 – If sometimes you feel better and you forget pain, it suddenly reappears, sometimes softly, while other times it attacks you in a violent way that blocks you from any movement. When this happens and you are with other people, you realize that they do not understand. Then you deal with another type of pain, perhaps inner, or psychological, that is even more distressing.

The link between the expression of pain and the language game leads Wittgenstein (1956:118) to state «384. You learned the concept "pain" when you learned language». So it is possible to study the grammar of this language game, and its relation with that peculiar *form of life* represented by a patient suffering from chronic pain. When translating this into a structural perspective, we should say that the verbal expression of pain, like moans and gestures, are the expression plan, which articulates the peculiar form of life represented by the patients suffering from chronic pain. I make this move in analogy to Gilles Deleuze (1986, engl. trans., 41-42). Deleuze replaces the relationship between «words» and «things» proposed by Foucault (1966) with an expression plan made of discoursive formations, linked to some forms of the content plan – in our case: forms of life. So chronic pain is a different story in the perspective of the doctor and in that of the patient:

Chronic fatigue syndrome is defined as long-standing, severe, disabling fatigue without demonstrable muscle weakness. Underlying disorders that could explain the fatigue are absent. Depression, anxiety, and other

psychologic diagnoses are typically absent. Treatment is psychologic support, often including antidepressants, and limited rest. (Beers 2006)

Let us compare this description of with the story of patients suffering from it:

Patient F41 – I remember in April I had a bad car accident, which involved more than 10 cars. At first I thought tit was a brake malfunction. Later I understood I confused the brake and the accelerator. From there began my absurd story I repeated for years to a number of doctors ... On the morning of May 2, 2004 I woke up as if I had the classic intestinal flu ... I went to my teaching job at the gym. As I walked, I felt the strange sensation of not feeling the floor beneath your feet. During class, I experienced a deep fatigue and mental confusion: I could barely stand up. I had to stop the lesson and go home. I started the car in a haze, as if I had forgotten how to drive, or like I had lost the ability ... It took me over an hour to arrive, when usually it only takes 10 minutes.

Patient M5 – It is more difficult to stay in public places. In some cities there are not even benches — it seems so absurd. I think a bench is salvation, I would be able to do a little shopping, getting to a place without having to stop at every bar, having to spend money for this privilege (six euros to walk around is not a joke).

My impression is that in the medical definition we find everything except the essential to understand the meaning of chronic pain from the point of view of the patient considered as a form of life. There is the same difference when you answer questions in the ambulatory and you converse in the waiting room. In the first case, we miss everyday experience, which is relevant from an ethnosemiotic perspective to the meaning of pain. In order to understand this meaning, a good alternative to a logical definition of pain is to study its narrative role in the story told by the patient. That's why I'm interested in a translation between Wittgenstein's conceptual instruments and the ones provided by textual semiotics. Though they are dissimilar, they seem complementary.

6. Perspectives

I found some structural characteristics in the narration of chronic pain, which are indeed useful to detail the particular form of life related with it. They will be the topic of further publications. For example, we have some violations of the

⁴ Francesco Marsciani suggested me this comparison. He analyzed different kind of healthcare spaces in a semiotic perspective – cf. Marsciani (2007).

canonical narrative scheme proposed by Greimas and Courtés (1979): the contract with the doctor (which should play the role of the protagonist's sender) is impossible because no performance of the protagonist (the patient) leads to his healing. Other problems are the same experienced by heroes in fairy tales according to Propp (1928) (e.g. «not being believed»).

Another good comparison, suggested by the link between the language game and form of life, is between the role of pain in the narration of chronic and terminal patients – the second kind of pain concludes with death, considered as the end of suffering, when the first is meaningless because there is no end.

All these studies could explain the difficulties of the chronic patient encounters in attributing a meaning to his pain as narrative and expressive difficulties; furthermore, they could suggest a «narrative therapy», consisting in the removal of the causes which prevent pain expression – in the frame of contemporary narrative-based medicine (NBM; see Galvagni 2009; Cagli 2009).

References

BEERS, M. (ed.)

2006 The Merck Manual, XVIII edition, Merck & Co., Inc., Whitehouse Station (NJ).

DELEUZE, G.

1986 Foucault, Minuit, Paris; trans. Foucault, Continuum, London, 1988.

CAGLL V.

2009 «Un medico per il nostro tempo. Solo un tecnico efficiente o anche un uomo di cultura?», in GALOFARO 2009, pp. 93-100.

Eco, U.

1976 A Theory of Semiotics, Indiana University Press, Bloomington.

1986 Semiotics and the Philosphy of Language, Indiana University Press, Bloomington.

FOUCAULT, G.

1966 Les Mots et les Choses, Gallimard, Paris; trans. The Order of Things, Pantheon Books, New York, 1970.

GALVAGNI, L.

2009 «Narrazioni e creatività morale: nuovi approcci etici in medicina», in GALOFARO 2009, pp. 81-92.

GALOFARO, F.

2007 «Interpreting Radiograms», in Giampaolo Proni (ed.) Peirce and Image 1, Centrostampa dell'Università di Urbino, Urbino.

2009 Etica della ricerca medica ed idenità culturale europea, CLUEB, Bologna.

GOOD, B. J.

1994 *Medicine, Rationality, and Experience: An Anthropological Perspective, Cambridge University Press, Cambridge.*

GREIMAS, A. J. and COURTÉS, J.

Esercizi Filosofici 6, 2011 / Contributi

1979 Sémiotique. Dictionnaire raisonné de la théorie du langage, Hachette, Paris; trans. Semiotics and language: an analytical dictionary, Indiana University Press, 1982.

HJELMSLEV, L.

1961 Prolegomena to a Theory of Language, the Regents of the University of Winsconsin.

KRIPKE, S.

1980 Naming and Necessity, Basil Blackwell, Oxford.

LE BRETON, D.

1995 Anthropologie de la douleur, Métailié, Paris.

LEVI-STRAUSS, C.

1958 Anthropologie structurale, Plon, Paris; trans. Structural Anthropology 1 and 11, Doubleday Anchor Books, New York, 1963-1967.

MARSCIANI, F.

2007 Tracciati di etnosemiotica, Franco Angeli, Milano.

MILLIGAN, E., WATKINS, L.

2009 «Pathological and protective roles of glia in chronic pain», Nature Review Neuroscience, January, 10, 1, pp. 23-36.

MONK, R.

1990 Ludwig Wittgenstein. The duty of genius, Jonathan Cape, London.

PROPP, V.

1928 Morphology of the Folktale, 2nd ed.; trans. University of Texas Press, Austin, 1968.

RUSSELL, B.

1905 «On Denoting», Mind, 14, 56, then in Logic and Knowledge, Allen and Unwin, London, 1956.

WITTGENSTEIN, L.

1922 Tractatus logico-philosophicus, Routledge & Kegan Paul, London.

1958 Philosophical Investigations, Basil Blackwell, Oxford.

41968 «Notes for Lectures On Private Experience and Sense Data», The Philosophical Review, 77, 3, pp. 275-320, then in WITTGENSTEIN 1993, pp. 200-288.

1993 *Philosophical Occasions*, Hackett Publishing Company, Indianapolis.

Sources for the fragments by C.S. Peirce:

CP x.xxx (volume.paragraph) = Collected Papers of Charles Sanders Peirce, 8 volumes, vols. 1-6, eds. Charles Hartshorne and Paul Weiss, vols. 7-8, ed. Arthur W. Burks, Harvard University Press, Cambridge (MASS), 1931-1958.

SS xxx (page number) = Semiotic and Significs: The Correspondence Between Charles S. Peirce and Victoria Lady Welby, ed. by Charles S. Hardwick & J. Cook, Indiana University Press, Bloomington, 1977.