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The experience of pain and its ontological modelling from a philosophical point of view: Phenomenological description and ontological revision of the McGill Pain Questionnaire

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Abstract

The aim of the article is to identify, on the basis of the phenomenological and ontological analysis of the experience of pain and the ways in which this experience is expressed in natural language, an ontological modelling of the language of pain and, at the same time, a revision of the traditional version of the McGill questionnaire. The purpose is to provide a different characterisation and an adequate evaluation of the phenomenon of pain, and, consequently, an effective measure of the actual experience of the suffering subject.

KEYWORDS

McGill questionnaire, narrative medicine, ontological modelling, pain, phenomenology

1 | INTRODUCTION

The experience of pain is a multidimensional phenomenon involving a variety of bodily, psychological and social aspects. Within this phenomenon, one of the most problematic yet important elements is the link between the experience of pain and its expression in natural language.

This issue has been variously analysed by philosophers of all kinds throughout history. In this work, we will take into account how phenomenology—one of the most relevant schools of thought in Western philosophy—offers us a new account of the nature of pain and its relationship with language that we will employ to revise the traditional model and questionnaires about painful experience.

Before getting to the heart of our analysis, we shall summarise the most philosophically relevant aspects of the relationship between pain and language, focusing on contemporary philosophy:

a. Natural language and the experience of pain are two distinct but interconnected phenomena.
b. Pain is an all-encompassing and multidimensional experience that involves the entire experience of the subject in a complex condition that can be defined with the term suffering.
c. Generally, pain has been thought of as a qualitative and bodily experience[1,2] and as a mental state,[3] which can be expressed and interpreted through natural language.
d. Natural language is a tool to describe, explain and explore the world, including the experience of pain.[4]
e. Natural language is a means of intersubjective and collective communication.
f. Pain is a subjective affection with a completely private epistemic access that entails a polysemy of interpretations of the same phenomenon.
g. The relationship between natural language and pain is dynamic, as it is influenced by the lexical, grammatical and semantic structure of a specific language and sociocultural context.[5]
h. Natural language can be used to provide a framework for understanding the experience of pain and to explore potential methods for dealing with it.

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i. For a large part of contemporary philosophy, linguistic expression is essential for analyzing the phenomenon of pain.
j. The relationship between linguistic expressions of pain and the speaker's experience of pain is still an open problem for all disciplines and requires a philosophical effort to interpret the particular language.[6]

All these reflections that pinpoint the pivotal role of language and communication for the understanding of pain (for the suffering individuals, as well as the patient and the medical staff) drove us in considering the importance of the so-called narrative medicine.[7,8] Narrative medicine is based on the idea that language has the power to transform pain because language represents suffering in a meaningful way, allowing individuals to find a sense of identity and understanding of their condition.[9] The use of storytelling in medicine allows people to express their feelings and experiences in a meaningful way for both themselves and their medical team. This nurtures and strengthens the connection and understanding between the patient and the practitioner, which can lead to greater trust, acceptance and improved treatment outcomes.[10,11]

Given the function of language, various instruments for assessing and measuring pain of a linguistic nature have sprung up, such as the McGill questionnaire, which represents on the one hand a virtuous attempt and on the other a problematic instrument both philosophical and ontological levels.

Thanks to the convergence of the analysis on the phenomenology of pain and its relationship with language—we will finally focus on the latter field of study: the ontological used to describe the experience of pain expressed in verbal language through ontological modelling.

2 | THE PHENOMENOLOGICAL APPROACH TO PAIN

Phenomenology is one of the most famous schools of thought in philosophy. Originating from Edmund Husserl, phenomenology is nowadays well alive and tackles the various aspects of experience, including that of pain. To describe pain phenomenologically means to provide a description (and not an explanation) of the lived experience of pain, regardless of all those external factors (e.g., neuronal, social, cultural, historical states) which, although indispensable in activating, the experience of pain, are nevertheless not an integral part of pain as an actual, concrete experience of pain.

For phenomenologists, the biology, neurophysiology and even the sociology of pain, however useful they may be in clarifying the causes of the emergence of pain, do not seem to be as useful in clarifying the nature of the experience of pain itself. Similarly, the acknowledgement of the neurophysiological mechanisms that cause pain does not suffice in describing the lively sensation of suffering individuals. Although natural sciences (neuroscience, biology, sociology, psychology) and social science contribute to understanding pain, phenomenology identifies an autonomous domain of research, that is experience as such—namely subjective experience.

The phenomenological challenge is to clarify the internal structure of experiences and in particular of the experience of pain. This is the sense of the phenomenological motto 'Zurück zu den Sachen selbst', indicates the need to provide a pure description of experience by shrudding all the prejudices or conceptual habits (scientific and cultural) loaded on our conception of the experience. In the explicitation of the experience of pain from within, the first thesis that emerges is that the phenomenological nature of pain cannot be divorced from the reference to the first person. A pain that is not experienced in the first person could in fact be defined as painless pain, an expression that sounds as senseless and contradictory—as talking about a squared triangle.

Even if we turn to the definition of pain provided by the International Association for the Study of Pain in 1979, we can recognized some limits in their definition of pain: 'Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage'.[12] We can notice that this definition fails to capture the specificity of pain, if we consider that even nausea, dizziness, heartburn, hunger, thirst, and itching are an 'unpleasant sensory and emotional experience', although they do not correspond exactly to the painful sensation. Hence the need for a phenomenological investigation that draws out its specificity.

The second thesis is that phenomenology as a descriptive analysis of pain does not deal with the idiosyncratic nuances of the experience of pain in individuals (or in individual cultures). Rather, it attempts to provide, through the two methods of phenomenological reduction and eidetic variation, an analysis of the essential structure of pain, of what we might call its ontological modelling.

Phenomenology brackets all naturalistic and factual considerations and is essentially concerned with invariants,[13,14] in search of what characterises experience as such; and the experience of pain as such.

The ontological modelling of pain considers the temporal dimension of the experience of pain and its realisation in the living body (*Leib*) to be a fundamental aspect. Phenomenology, through the analysis of the temporal dimension and embodiment, aims to subtract the phenomenon of pain from that ineffability, incommunicability and cognitive elusiveness that has been attributed to it by many.

Phenomenology's attempt to overcome psychologism and introspectionism[15] by means of methodological tools such as epochè and eidetic reduction, offers the possibility of establishing a theory of the experience of pain and a theory of the expression of the experience of pain that are not idiosyncratic but, on the contrary, categorisable and shareable, albeit always experienced in the first person.

At the same time, such methodological tools allow us to avoid the thesis that only those who suffer or are ill themselves have the privilege and the possibility to talk about their pain or illness.[16] Indeed, the notion, crucial for phenomenology, of invariance allows us to identify that internal structure of pain that characterises consciousness in general.

Pain has, like all experiences, its own solidity, recognisability, non-amendability and indubitability.[17] Alongside this thesis is another, which attempts to identify in the expression of pain by,

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for example, a patient, the trace of the lived experience of pain and its variations, to offer a conceptual modelling of it. Just as the notion of invariance allows one to overcome the objection of introspectionism, the notion of conceptual modelling allows one to overcome the charge of solipsism.

For the solipsist, suffering is inevitably enclosed within the confines of consciousness and personal experience, inaccessible to any possibility of externalisation. This makes it difficult, not to say impossible, to understand the pain of others and consequently to engage in constructive dialogue, for example, between patient and doctor. Indeed, the experience of suffering seems to be unavoidably inaccessible to anyone except the one who experiences, in the first person, that suffering.[18]

Two observations can be made in response to the accusation of solipsism. The first consists in reaffirming the separation between phenomenology and psychology:[19] the aim of phenomenology is not to relegate the concepts of illness and pain to a private experience, accessible through a privileged and incommunicable access, but to ground these concepts in experience. Put in other words, the specificity of phenomenological description does not lie in proposing an empirical and factual analysis of experiences of suffering and pain, but in identifying what is essential in such experiences.

The second observation lies in underlining, along with the phenomenological experience, the relevance of the expression, both verbal and nonverbal, of the experience of pain and suffering, for example, by patients. This is to specify not only the structure of the experience of pain, but also the degree (albeit indirectly) of that experience, which can only be detected in the communicative sphere. The consideration of the expressive dimension will also open the door to the hermeneutic dimension of pain,[20–22] that is, to the identification of an alternative semantic register to the reductionist one. This means that we are able to consider the patient in his globality and to consider pain not as a malfunctioning of a mechanism that can be fixed by 'adjusting' the part that does not work, but as an experience endowed with its own structure that concerns the living being in its globality and in its wholeness.

There are thus two outcomes that phenomenology aims for: to provide a clarification of the structure of the experience of pain and develop a categorisation and modelling of the linguistic expression of it.

3 | PAIN AND INTENTIONALITY

The first problem that the clarification of the phenomenological structure of the experience of pain must address is the attribution or nonattribution of an intentional structure to this experience. According to Elaine Scarry, 'desire is desire of x, fear is fear of y, hunger is hunger for z; but pain is not "of" or "for" anything-it is itself alone'.[17] In open opposition to this thesis regarding the phenomenological nature of pain, Olivier considers pain as a form of perception, and consequently as an intentional experience. Pain, he states, is a 'disturbed bodily perception bound to hurt, affliction or agony'.[23]

The theoretical position we adopt saves some aspects of both positions. In agreement with the first thesis, we hold that, unlike intentional feelings which are always directed towards someone or something (love is love *for* someone; fear is fear *of* something, etc.), pain is not *for* someone or *of* something. To put it differently, pain has no referential content. This thesis exposes the phenomenology of pain to the charge of inexpressibility: if pain has no referential content, then it resists any linguistic objectification.[17]

The second thesis holds that pain is an intentional experience, an act directed towards objects. However, this thesis seems to go against the actual experience we have of pain: pain is not being conscious of an object. In pain, nothing appears; it is simply experienced. Moreover, unlike other experiences, the experience of pain invades the entire conscious dimension.[24] In this sense, pain intrudes and breaks into the conscious field like sudden noises that break the calm, or unexpected movements that interrupt the stillness. The invasive, immersive, atmospheric nature of pain seems to confirm the unintentional nature of pain.

However, our thesis argues that pain is an intentional feeling characterised not so much by being directed towards objects in the world as by being directed towards the particular 'object' that is our physical body.[25] According to this thesis, pain is indeed an experience of consciousness, but directed at a very specific object, namely our body (*Leib*).[23,24,26]

If so, there is still room for a third position. Pain is a sensory feeling or a feeling-sensation and not an intentional feeling. It does not turn towards objects in the same sense that a visual or auditory perception, an imagination, or an emotion, such as fear, turn towards objects. Yet pain can still be directed towards an object, albeit in a very peculiar sense. This 'object' is our body. Pain takes on an affective rather than an object-constitutive function. Affection, although not intentional, is still 'directed' towards something. The difference is that this 'directing' is no longer relative to intentionality but to localization. As Merleau-Ponty[27] had well grasped, the frame of reference is the entanglement rather than the direction.

To summarise, these are the essential characteristics of the experience of pain from a phenomenological point of view:

1. *Privileged access*: pain is always experienced in the first person.
2. *Passivity*: pain is an affective state, as such endowed with a pathetic dimension.
3. *Value structure*: pain, like emotions, detects certain aspects of one's body that have become salient.
4. *Motivational force*: pain, as an emotion, orients and disposes to act in a certain way.
5. *Atmospheric character*: pain, like moods, impregnates and colours our experience.

4 | ONTOLOGICAL THEORIES ARE NOT REALLY PHILOSOPHICAL ONTOLOGIES: THE CENTRALITY OF THE BRAIN

The ontological modelling of natural language to describe pain is based on the idea that language can be used to represent properties of pain, such as its intensity, duration, location and characteristics.

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The interdisciplinary ontological study of pain has as its assumption the *new* scientific definition of pain formulated by the International Association for the Study of Pain in 2023, an international scientific organization focused on pain research and management: «*Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage*».*

An ontological model can be useful in improving physicians' and researchers' understanding of this notion of pain, and in helping patients communicate their experience more precisely and in detail.

Ontological models can become an even more effective tool in medical settings:

- They can provide the structure for pain assessment and measurement tools that include qualitative elements such as emotions as is the case with the McGill Pain Questionnaire (MPQ).[28,29]
- They can be formalised and implemented into machine learning models aimed at building automatic natural language analysis software that allow the medical team to automatically obtain information interpreted from their patients' verbal communication.[30]

The ontological theories that underlie the studies on ontological modelling are not properly philosophical ontologies.

Contemporary scientific studies have proposed various theories to explain the nature of pain and its relationship to other aspects of experience without the concrete integration of a philosophical approach but relying heavily, for example, on the language-brain relationship.

One of the most influential theories is the *Gate Control Theory* of pain, proposed by Ronald Melzack and Patrick Wall in 1965. According to this theory, pain is the result of the activation of specific neurons in the spinal cord that transmit pain signals to the brain. However, the activity of these neurons can be modulated by other sensory inputs and by emotional and cognitive control processes, which can 'close the gate' and reduce pain perception.

Neuroscientist like Karl Friston[30,32,33] proposed another important ontological model called the *Error Prediction Theory*. According to this perspective, the brain continuously creates predictive models of the external environment and uses these models to anticipate future events like a prediction machine.[34] When an error occurs between the prediction and reality, the brain signals this discrepancy as a feeling of pain.[35]

Many contemporary studies focus on the influence that pain has over memory and learning abilities[36–38] or over one's mood, suggesting that pain can negatively affect our mental health and well-being.[39,40]

A very interesting neuroscientific theory that focuses on the multidimensionality and constant interconnectedness of pain with respect to the subject's entire experience is the *Dynamic Pain Connectome*[41] which represents a network of dynamic neural connections involved in pain perception.

According to this theory, pain is a complex sensation that involves multiple brain areas and can be influenced by both physical and psychological factors. Kucyi and Davis' model considers pain as a dynamic phenomenon, in which the activation of some brain regions can influence the activation of others, creating a sort of *domino effect* within the neural network. The *dynamic pain connectome* proposed by the authors is based on the idea that pain involves not only the brain regions associated with sensory perception, but also those involved in emotional and cognitive processing.

According to this model, the activation of each module depends not only on the perception of pain itself, but also on the subject's previous experiences, expectations, emotions and cognitive and social factors. How to accord these neuroscientific theories with language, especially verbal language? Is it the right strategy, for example, to isolate verbal communication in an eminently cognitive category as denoted by the dynamic pain connectome?

One of the most complicated aspects that is occupying contemporary interdisciplinary studies is the link between pain and natural language. For contemporary ontological studies and ontological modelling, natural language, in addition to nonverbal language, constitutes a true index of information about the quality of a person's life, especially where the topic of interest is one of the most private experiences of the living as is that of pain. This relationship is complex and multifactorial, involving both physiological and psychological aspects. Scientific studies have highlighted several ways in which language influences the experience of pain and vice versa.

First, language can influence the experience of pain through the power/weight of words to the extent that the words used to describe pain can influence the perception and tolerance of pain.

For example, words that evoke emotionally negative images such as frightening may increase the sensation of pain, while words that suggest a greater ability to control pain may reduce the perception of pain.

Furthermore, language can influence the experience of pain through the process called causal attribution. People tend to seek a rational explanation for their pain, that is, they look for an apparent and clear cause of their pain. If they do not find a cause, they perceive the pain as even more distressing. The language used by the medical team and health professionals can therefore influence the patient's perception of pain, either by arousing anxiety or by reassuring explanations.[42–44]

Language also influences the communication of pain beyond the clinical setting, between individuals in general. The way pain is communicated affects the perception of intersubjectivity and the ability to provide support and care. For example, clear pain communication can facilitate identification of causes and clinical treatment, while confusing or exaggerated communication can create misunderstandings and difficulties in pain management.[45]

Finally, the experience of pain may affect language itself. Some people who suffer from chronic pain may develop specific language to describe their pain, using terms such as 'stinging', 'cruel' or 'burning'. This type of language may influence others' perception of pain and may affect their ability to understand and respond to others' pain. Patients are often aware of the importance of doctor–patient linguistic communication, so much so that in some cases of chronic

*This definition is the result of a revision made in 2020.[31]

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pain, the patients themselves ask the doctor for clear and planned language to develop personalised and consistent communication.[46,47]

In the following sections, we will analyse the ontology underlying the MPQ.

5 | THE ONTOLOGICAL CATEGORIES AND DESCRIPTORS USED TO ANALYSE SUFFERING PEOPLE'S VERBAL EXPRESSIONS AND TO COMMUNICATE WITH THEM: THE CASE OF THE MCGILL QUESTIONNAIRE

Ontological models have multiplied and diversified since the 1960s. In this section, we will analyse some examples of ontological structures used for the analysis of patient narratives, the construction of pain assessment and measurement tools.

The most famous and internally renowned questionnaire is the MPQ, a multidimensional pain scale.

Multidimensional pain scales like MPQ assess the following:

- Associated factors;
- location/severity;
- chronicity;
- quality;
- contribution/distribution;
- etiology of pain, if identifiable;
- mechanism of injury, if applicable;
- barriers to pain assessment.

Despite its current widespread disuse, this tool continues to be a main reference for the investigation of the experience of pain, including the consideration of verbal language as a variable for clinical investigation of the pain phenomenon.[48–52]

Even the positive results related to the reworkings and validations of the MPQ by cultures and languages that are profoundly different from the one originally considered (English) confirm the theoretical importance of this tool. We can say that the questionnaire and its language have successfully passed the most arduous test for a tool of this type: its translation into various languages. This is already an important validation which, on the one hand, confirms how fundamental language is in the investigation of pain and, on the other hand, how the multi-dimensional theoretical approach and the authors' choices of linguistic descriptions have a sufficiently generalizable and useful value for communication.[14,53–55]

Nevertheless, we cannot ignore that this tool has fallen in disuse. In daily clinical experience, medical personnel and healthcare professionals prefer to use only quantitative measurement and evaluation scales found in the pain MPQ that are much more reductive and limited than the general scope of the questionnaire.

Philosophical reflection leads us to pause and ask ourselves why such a tool is continuously validated and reviewed while not being actually used in healthcare practice. As anticipated in previous works,[56] the answer to this question is quite interesting. The ontological structure that emerges from the questionnaire and the choice of linguistic descriptors represent both the strengths of the MPQ and its elements of extreme weakness that are leading it to a pragmatic failure.[51,57]

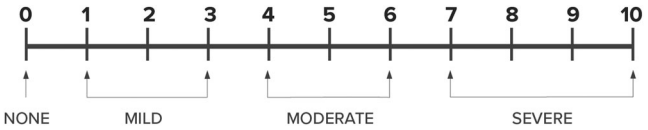

FIGURE 1 Example of verbal rating scale.

Below we will analyze the ontological structure of the pain evaluation and measurement tool from a phenomenological point of view. This questionnaire is presented to the sufferer,[†] who must choose the words that correspond to their pain. The chosen linguistic labels represent the most frequent terms found in patients' reports collected at a preliminary stage and later analysed for the formulation of the questionnaire, and also terms taken from earlier work, such as K.L. Dallenbach's list of 44 terms from the 1930s.[58]

The MPQ also includes the drawing of a human body front to back to pinpoint the spatial location of the pain, along with a verbal rating scale (Figure 1) and a verbal description scale, that is, linear one-dimensional scales that quantify the intensity/entity of pain.[59]

These scales are used to obtain a numerical index, the Pain Rating Index (PRI), which detects the amount of pain perceived by subjects.[‡,60]

Here are some examples of how the MPQ and its subtools: the present pain intensity (Figure 2) that it's based on a scale of 0–5 with related descriptors and MPQ Index Chart (Figure 3).

In the figure below (Figure 4), it is visible an example of MPQ:

The MPQ classifies 102[§] different terms, symbols of different characteristics of pain. The terms are divided into 4 classes and 20 subclasses, corresponding to different aspects of the phenomenon.

The four ontological classes correspond to four fundamental aspects of pain (Figure 5):

Each subclass is composed of a group of words (descriptors) belonging to the same family.

Below is the summary of the descriptors' distribution of the MPQ categories (Figure 6):

The subject that receives the questionnaire is explicitly asked to choose only one term for each subclass. From the analysis of the chosen words, it is possible to obtain a global score and a partial one relative to each class.

[†]When the structure of the questionnaire and the choice of descriptors was constructed, the examined patients presented pain from various pathological conditions: phantom limb phenomenon, back tabe, dystrophy, and so forth.

[‡]Several pain measurement scales are available such as the iconic scales used to investigate pain in children, geriatric patients and all patients with severely impaired language-communicative abilities such as the Wong–Baker scale.[61,62] (Dubois et al., 1999). Additionally, there are one-dimensional rating scales used in other questionnaires such as the Brief Pain Inventory.[63]

[§]For example, in the short-form SF-MPQ version, the questionnaire is presented with 15 descriptors representing only the psychic and affective classes, associated with a numerical intensity scale.

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PPI	
Variable	Details
0	NO PAIN
1	MILD
2	DISCOMFORTING
3	DISTRESSING
4	HORRIBLE
5	EXCRUCIATION

FIGURE 2 The present pain intensity (PPI).

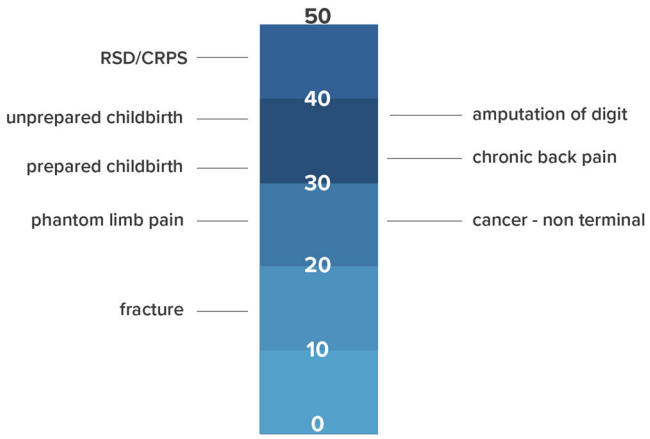

FIGURE 3 MPQ Index chart.

6 | PHILOSOPHICAL REVIEW OF THE MPQ: ONTOLOGICAL WEAKNESS

Below is a summary diagram (Figure 7) of some of the philosophically relevant and critical points with respect to the structure at the basis of the MPQ. We point out that the MPQ is used here as an explanatory case study of theoretical and ontological criticalities found, in general, in the scientific perspective relating to the analysis of the characteristics of the experience of pain and its relationship with verbal language.

Here is a detailed list of the shortcomings of MPQ, in our opinion:

i. Inadequate theory of emotions. Considering the categorical structure and the choices of descriptors, there seems to be no real theory of emotions. The relationship between the emotions investigated and the basic categories is not acknowledged and it is not clear what type of value and information the emotions convey with respect to the experience of pain of the subject interrogated by the questionnaire. Furthermore, taking into consideration the various theories of emotions,[64,65] we notice a structural incompleteness since emotions of positive polarity are practically not considered. This results in a total negative polarization of pain: in MPQ there is no trace of affective phenomena such as hope, calm, trust, reverence, tenacity or, as far as the sensory dimension is concerned, relief. This exclusively negative emotional background reflects a precise theoretical setting according to which pain is a private phenomenon. In this way, the subject is inhibited not only from expressing any positive emotional experiences, but from activating their personal resources to face their condition.

ii. Inadequate theorization of the relationship between pain and emotions. In direct consequence with (a) emotions are understood here as effects/consequences of pain and not as an integral part of pain itself. A vision of this type makes us lose the intimate and reciprocal relationship that emotions, including the peculiar one of pain, build amongst them, then flowing into the subject's condition of malaise or general well-being. Emotions are not consequences of pain, they are its qualitative variations: pain, for example, neither causes nor generates boredom, but emerges alongside it.

iii. Imprecise distribution of emotions with respect to the categorisation proposed by MPQ. A consequence connected to (i) and (ii) is that emotions, instead of pertaining only to the class they belong to, the affective class, are distributed across all four classes: boredom (sensory class); fear, terror (evaluation class); disgust (mixed class).

iv. Unilateral characterization of the ethical-moral dimension. There is a pervasive distribution of emotions and evaluative phenomena of a markedly judging nature, characterized by a unilateral and always negative moral choice: pain is cruel, punitive, painful, torturing, and so forth. This once again brings up the problem identified in point (i): these evaluations of ethical-moral order represent a precise vision of the qualitative dimension of pain. Pain goes from being an affective element among others to being, unilaterally and incontrovertibly, a symptom or even the disease to be eradicated. This moral conception of negative worth becomes a problem when we consider the issue of chronic pain. If we consider pain as an element to be eliminated, we risk reducing the experience of chronic pain to a purely punitive, cruel experience without any solution.

v. Absence of the temporal dimension of experience. The ontological structure of the MPQ is essentially episodic and does account for the transformation of the pain phenomenon into the experiential flow of the living subject. Typically, neither temporal features such as the relationship between pain, memory and future expectations, nor their relation to changes of the condition, are present, just as there is no explanation of important phenomena such as repetition and habituation. The only reference to temporality is found, in some variants of the questionnaire, in relation to drug therapy and its attempt to improve the patient's condition and also in eight descriptors limited to the mode of presence of pain (brief, momentary, transient, rhythmic, intermittent, continuous, stable, constant). The almost total absence of the temporal dimension also affects

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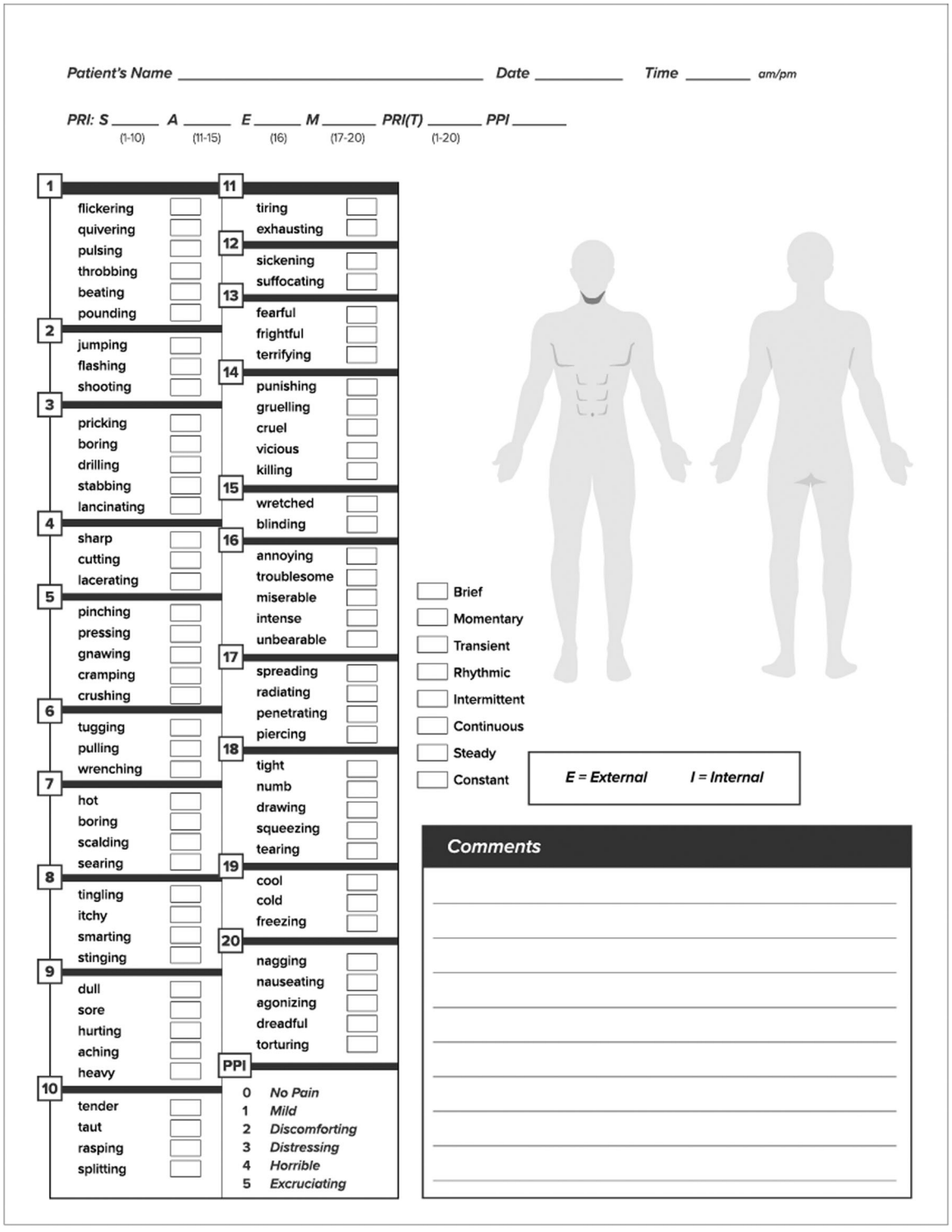

FIGURE 4 Example of MPQ.

the choice of emotions included whose nature can be described, so to speak, as presentifying. Additionally, more markedly dynamic states on a temporal level are absent, such as trust, tenacity, pride, disappointment, hope. Surely, the episodic nature of the questionnaire and tool does not play in favour of a temporal analysis of the painful experience or of a focus on how the pain phenomenon is changed, together with all its affective, evaluative and relational characteristics. To recover the temporal dimension of the pain experience, that is, the change in pain in the flow of experience, there are other types of tools to be used that are more suitable for monitoring the change in pain through the patient's narration. An example are

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care diaries.[66–68] Constant and continuous monitoring of the patient's narration would allow us to make the most of the information potential of verbal language since it is possible to observe the emotional, motivational, and evaluational change of pain and its long-term reaction concerning drug therapy. Naturally, said continuous and wide-ranging monitoring is unthinkable by the medical team and healthcare professionals, which is why ontological modelling becomes essential to train automatic language recognition tools capable of monitoring and delivering information to the team for interpreting the patient's narrative.[69–71]

vi. Weakening of the phenomenon of intensity. As a consequence of (v), we note that the intensity is reduced and understood as a synonym of strength, which is more episodic in nature. However, it is plausible to consider intensity as a deeper dimension, a phenomenon emerging from the choral relationship of the various aspects of pain, not merely attributable to the measurability of elements, such as acute and burdensome, and an indication of that multidimensionality of pain itself;

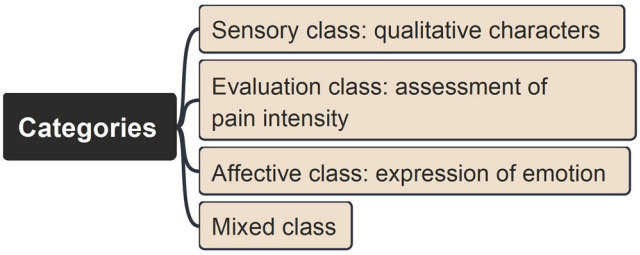

FIGURE 5 Categories of MPQ.

vii. Lack of differentiation between types of pain. The ontological structure underlying the MPQ tries to account for the complexity of the phenomenon and yet, in explaining the various facets of pain, it ends up reducing pain itself into a single class, the mixed one. This inhibits the diversification of the various types of pain, which are grouped incorrectly. In fact, emotional pain does not have the same characteristics as psychological or physical pain, and vice versa.

viii. Wrong communicative setting. In MPQ, pain is the recipient of the investigation and not the human subject in all its complexity. Those who are affected by pain seem to dissolve in the characters that pain manifests, revealing itself as an entity that is, in a sense, foreign to the experience itself. Pain is questioned directly, favouring how pain acts on the subject and not on the subject experiencing the pain. For example, we tend to see pain as something that makes us suffer, and we forget to consider the subjects themselves as suffering;

ix. Reduction of the *Leib* to an object. We have found a reduction of the suffering human body to an object of experience. This reduction is particularly evident in the descriptors included in the sensory class. The descriptors, instead of thematizing the subjective nature of the sensitive elements, express pain through actions performed on the body by external objects: needles, pins, knives, blades, nails, and daggers. Aware of the fundamental importance of rhetorical language and specifically of metaphorical language in the doctor–patient communication tradition,[6,72,73] philosophy is tasked with warning about the interpretation and normalization of linguistic descriptors of rhetorical nature for describing pain. The risk of this normalization is producing *pseudometaphors* that block the exploratory

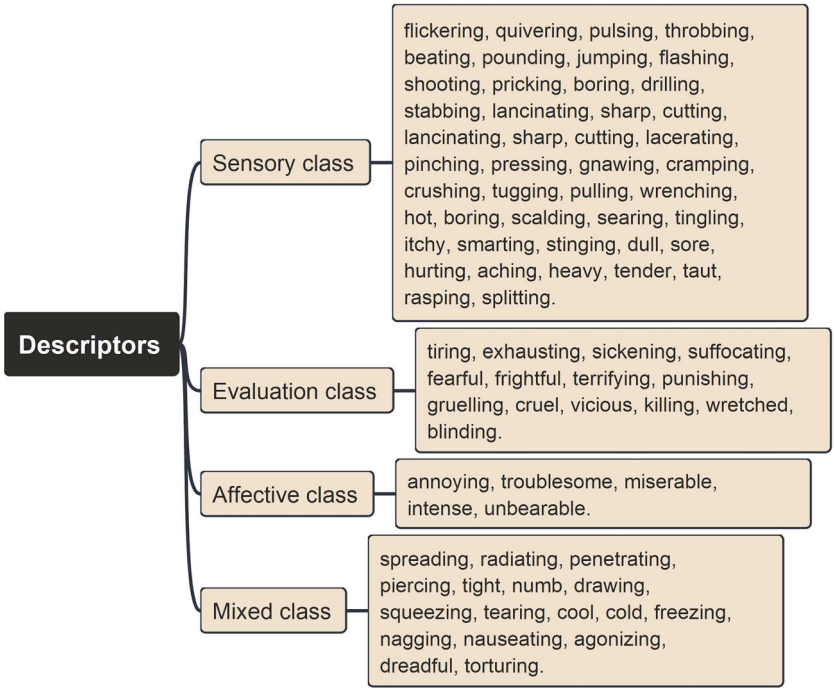

FIGURE 6 Descriptors of MPQ.

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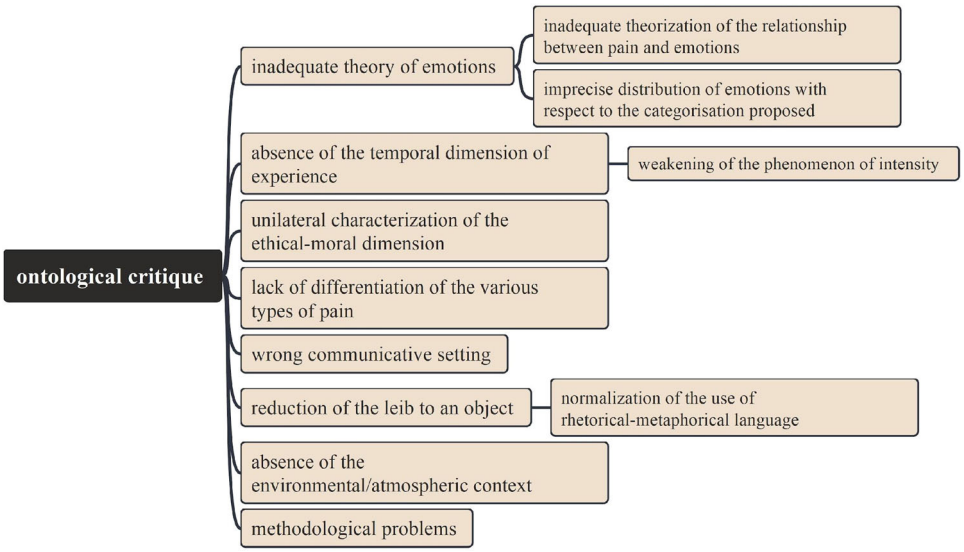

FIGURE 7 Ontological critique.

semantic movement typical of the metaphor that is naturally a *movement-comotion within semiosis*.[74,75]

x. This *pseudometaphor* poses another profound risk inherent to the performative nature of rhetorical language, which characterizes the meta-meaning of rhetorical tools not in a descriptive sense, but with a persuasive objective.[76] Are we certain that metaphorical language is the most appropriate and spontaneous in describing one's experience of pain? In other words, the metaphorical use of language does not allow us to investigate the experience of pain in a holistic way without considering the persuasive and partly manipulative nature of the rhetorical language in general which has, in this specific communication, the objective of parcelling out the bodily experience and quantifying it.

xi. Absence of an environmental/atmospheric context. The fundamental element of the relationship between a living subject and their habitat is totally neglected in this context and in general in doctor and healthcare workers–patient communication. We do not find in the MPQ and in the pain assessment and measurement tools, questions and elements that clearly refer to the relationship of the suffering subject with the environment. This absence is particularly burdensome since it has been ascertained,[77–79] especially in the case of chronic pain. The environment where the suffering subject lives, be it in a private home or, even more so, in a hospital ward, becomes a very crucial variable both on the perception of pain, its intensity and on the perception/reaction to therapies.

xii. Important factors such as environmental structure in view of motor and perceptive facilitation, aesthetics of the environment, environmental and therapeutic design, contact with natural elements, environmental digitization, perceptive atmosphere characterized by olfactory, and tactile and visual elements should be considered. All of these elements also profoundly influence the social relationships that the suffering subject has with doctors, health professionals, his own family, counsellors, and so forth. Therefore, the environment is never just an environment, but always a social environment.[80] In an experience of chronic pain with a patient that is bedridden or forced to live in a hospital ward, any environmental detail becomes fundamental (this also applies to private domestic environments). For example, even just the proximity to a window, which increases the visual horizon and offers heterogeneity, can be an intrinsic parameter in personal care since it relates to quality of life. The living environment nurtures what could be defined as the *atmospheric element* of quality of life, an atmosphere that conveys a whole series of affective qualitative backgrounds such as *emotional atmospheres*.[81–83] Precisely for this reason, the 'environment' category with all its subclasses (social, structural, aesthetic, etc.) becomes a fundamental ontological category, which cannot be eliminated.

xiii. Methodological problems. There has been much discussion in the literature about the small size of the sample used by Melzack and the methods chosen for the validation of the classification of the descriptors.[48] In particular, in grouping the descriptors into subclasses, the latter do not seem to represent descriptive characteristics of pain, but rather properties of the phenomenon, which constitute actual dimensions of pain, such as the thermal property (hot/cold), which is well identified, on the contrary, in multiaxial pain taxonomies such as the IASP Pain Taxonomy.[12]

7 | CONCLUSIONS

From a philosophical point of view, the fundamental problem deriving from the theoretical and ontological inadequacy at the basis of pain assessment and measurement tools, and more generally of the communicative clinical approach towards the experience of pain, is

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the identification of the subject with whom one wishes to communicate. If we were to unite the various critical points set out above, a possible synthesis could be the following: in dialogue and communication, one attempts to question pain directly and not the suffering subject. The experiential qualitative element called 'pain' is transformed into the subject to be treated, leaving the human subject behind an opaque background. For these reasons, in the structuring of the ontologies and ontological models placed at the basis of the new and, often, digital pain evaluation and measurement tools, a philosophical intervention is essential to identify the ontological categories and the relationships between them. Moreover, it is necessary to place sufficiently exhaustive and pregnant philosophical theories of the complex and multidimensional experience of pain at the basis of these categories.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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