



Framing Epi-diagnostic Characterisations on Pain in Neuropsychiatry.

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Pain Assessment in 21st-Century Neuropsychiatry.

Introducing Plural, Perspective, Situated Epistemic Frames for the Epi-diagnostic Characterisation of Pain Experiences.

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QII, Chapter §2

Structure of the Present Analysis: Framing Epi-diagnostic Characterisations on Pain in Neuropsychiatry.

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. *Introduction*

The following summary describes the relation of chapters in QIII, §1-10, concerning the development of the present epistemic inquiry on epidiagnostic characterisations of pain experiences in neuropsychiatry.

Thinking through the contacts among neurophilosophy, clinical epistemics, neurophysiology, epidemiology, psychiatry, nosology, clinical ergonomics (on the technologisation of medical data engineering for clinical assessment), and the dynamics of clinical evaluation as a proper diagnostic practice of recognition and intervention, these various stances push towards identifying how epidiagnostic characterisations look like: polyhedrons of multiple and intertwined façades? Palimpsests of overlapping layers? Recognitions of useful data underpinned by themes emerging from their focus of attention? Perhaps a blend of all those analogies? Those questions animate the chapters gathered in QIII to listen, from a historiographical point of view, as cultivating an ethnography of the scientific practice in 21st-century neuropsychiatric diagnosis, and at the same time to sound, as introducing a marine sound underwater, measuring their depth, scope, borders and conflicts observing, thus, how much new or current perspectives come to develop difformed, shifted, rearranged concepts of yore, how conventions get decided, by whom, on what purposes, under which climate of cultural and theoretical convention, in directions that are some times oblique to the advancements of different disciplines, or that by neglecting so, produce and reproduce concluding contents that bear conflicting factors to our own modern hypercontextualised themes, practices and theory of decision making.

Epidiagnostics seek to face those stressors in an overflowed panorama of scientific interfield acquaintances, when evaluation conjoins the 'over-(epi)-flow factor' detected by modern ethnographic, cultural and epistemological

studies as applied to clinical ambiances in the previous chapter. An epidiagnostic characterisation of the style proposed, thus, builds integration through difference, multiplicity, plurality, recognising partialities through perspectival approaches, and drawing athwart (crossways, crosswards) theory in its attempt at navigating across biological and theoretical complexity.

Framing epidiagnostics invites to acknowledge how contextual accounts of medical interpretations (agreed-upon nosographical knowledge) and clinical interpretations (in-balancing decision making addressed to a particular case, filling the gap between diachronic and synchronic trust; Cf. QII, §1) develop situated within precise epistemic niches, where the question about the necessary scientific themes to organise, to debate upon, to accept, to intervene, to apply, to rewrite or to refute emerges. Throughout four niches, this thesis exposes epidiagnostic characterisations as thematised by spaces of common understanding (niches A, B, C and D), composing an all-encompassing interpretational record that may be helpful in considering diagnostic evaluation of complex, heterogenous and multifactorial scenarios of pain experience, installed in the patients' 'living-with-the-pain', and thus, in the neuropsychiatric theoretical underpinning efforts of an epistemic 'staying-with-the-problem'. What follows is the structure of the present analysis through its 4 niches and 10 chapters, summarising and relating the contents proposed and serving as a guide facilitating the reader a clearer overview of this work as a whole.

A — *Neurophysiological Characterisations:
Historical & Comparative Traits*
(QIII, §1-4)

Pain evaluation would appear first in its virtual form, in an experimental, electrophys-

iological laboratory solution, as a rhetorical float for thinking about organic integrity (or evaluation of disintegrity) in 'On the Development of Pain Physiological Characterisations: A Brief Historical Contour' (QIII, §1). The first chapter of this analysis is an attempt at revealing the lines of thought that led to retain, debunk, rewrite and modify some of the underlying principles supporting today's convictions on nerve conduction in pain physiology. The text deals with a particularly old conviction, the idea that experiences are explicit contents, that sensations, perceptions or feelings perform as qualitative contents, which can be transported through the body to imagination, or moved by entelechies through our own body. This characterisation has been in focus along the history of pain research. Running the end of the 18th Century, this scene lived a clear transformation from early metaphysical accounts to a material physiologicism constrained by experimental requirements and scope limitations. The work invites to think that the characterisation of pain as a 'qualitative content' conducted through different continents, pores, filaments and channels, was being reshaped in the light of voltaic physiologicism towards understanding the very 'continent', the funnelling nerves, as properly qualitative. Working the continentality thesis interpreted through the propositions of Bell by year 1811, and Müller in his 1835-1840's works, nerves were now observed as the centre of explanation: specific channels, Q-fibres (substitute 'Q' by any specific qualitative evaluation, as pain or itch) and, thus, performing a specific Q-conduction. While buoyed up by the specificist foundational claim (ie, 'one perception, one receptor'), the thesis configured a proper account for the time, a material alibi for understanding neuropsychiatric conditions, and for accommodating the theoretical frame of physiological explanations into the realm of the technically observable. The introduction of a seemingly new responsible actor, 'nociceptors', as functional

specific perceptors of harm by Sherrington, resulted in clinical experimentalism as the thesis of qualitative continentality gained acceptance.

A brief contour of this ethnographic thread is exposed in two parts. Part I focuses the ancient seeds of entelechial qualitative concepts, providing an anthropological inspection on the worries that framed the physicalist interpretation of pain as a qualitative conduction that generated and reshaped through two geoaxes; a prior Eastern-axis that informed early medico-metaphysical inquiries, contacting a middle mediterranean area towards a Western-axis, that formally depicted the sensing qualitative contents until pre-modern theories of pain perception, further on configuring a tradition of scientific characterisation. Part II centres the 18th-century entry into modern materialism, observing the physiologist turn from qualitative contents to the thesis of qualitative continentality, ending with the propositions of Bell and Müller that supposed the starting point for future electrophysiology beginning the 19th Century —advancements reviewed in QIII, §2.

Conclusions from this chapter, by now informing about the meaningful scenario of concepts active by the end of the 18th Century, prepare the way for 'Building Pain Models: From Early Electrophysiology to the Complexities of the 21st Century' (QIII, §2), moving forward from 18th-century theoretical elaborations, and navigating a panoramic of pain models arranged until the current 21st-century physiological reasoning. Pain induction has been a main issue of experimentation in early electrophysiology throughout the 19th Century, focusing examination around infraspinal Peripheral Nervous System afferents. Running the 20th Century, new methodologies started to understand the role of voltage-irritative signatures, both through the medulla and the upper Central Nervous System, as evidences of pain transduction patterns. As a result, theorists began an era of pain modelling beyond sheer induction.

Approaching the 21st Century, reflex theories were transformed into more complex strategies, while differentiated labelings characterising the phenomenon-of pain sprang among interdisciplinary research.

With a comparative aim, the chapter covers a substantial repertoire of the main theoretical achievements in the western experimental inquiry on the topic in four points. Departing from the implications of the initial tenets proposed by the Müllerian turn, which configured the general orchestration for a proper field of pain electrophysiology throughout the 19th Century, it overviews the incipient theories in favour of specificism and intensity; advancing to early 20th-century integrativism, affectivity, summation and pattern theories, and the advancements of the second half of the 20th Century, which came with the exploration of transduction, mediation and modulation. A present recension about the complex scene of pain research in the 21st Century finishes the fourth point.

Some concluding implications are sketched, exploring some of the problems to which this historical thread has landed in the present. These include the lack of strongly framed interfield explanatory strategies; the problems produced by maintaining in currency hard readings of specificity for exposing the ultimate responsible actors in the biochemical scenario of fibres's performance; or the slow accommodation of fundamental intuitions into new scientific horizons. These horizons now present, in the majority of cases, a contemporary attempt at interpreting the big picture of phenomena and epi-phenomena implied in pain sensing, examining experiences, feelings and beliefs about pain beyond peripheral, spinal or localist approaches inherited from the past.

The next chapter, 'Sounding the Limits of Materiality & Over-Attribution: On Pain Fibre-Specialisation' (QIII, §3), reviews some of the major epistemological factors that led to form the historical shifts on the material attribution

of agency and roles to fibres and regions of the nervous system in relation to their role on pain conduction, as presented in the previous chapters. Putting the issue in Lambert Williams's analytical terms, it will be exposed how the historiographical thread of pain electrophysiological research presents a 'difformation process' that affected the underpinning considerations from which each historical and localised scientific context produced its interpretations on materiality, very often implying physiological reductionism. The inquired interpretational scenario frames a material over-attribution of evaluative qualitative agency that results fallacious in multiple senses, which in the case of pain physiology has been introduced through the arguments of fibre specialisation, discerning what stressor is the fibre specialised towards. Pre-evaluative reasoning demands for this identification morpho-functional characterisations that do not inform about any particular experience as proper to the fibres that argumentation is characterising, but proper to multiple central evaluations along the organism as a whole.

Problems on over-attribution, thus, of overall agency to specific parts of the system are to be exposed historically, epistemologically, and interdisciplinarily by this text in two parts. Part I will focus on the descriptive strategies that historically came to difform unitary theories's (oriented through unique original scientific fields) conclusions on pain conduction into interfield's interdisciplinary research conclusions in more modern times. Part II will extend the epistemological exploration on physiological reductionism in material attributions, and expose alternative ways for characterising pain experiences through integrative dynamic physiology as an attempt at resulting more applicable to neuropsychiatry or experimental therapy.

The last exploration of this niche A comes with 'Pain Physiographies: A Contemporary Image' (QIII, §4). Physiographies are consistently used in medical explanation and description:

charts, diagrams and images exposing, analysing, annotating physiological and anatomical matters of study, map and summarise clinical data while working as simplified instrumental scientific models. In managing different scales of complexity, such schemata show an immediate tool to face biological morpho-functional entanglements. This chapter sums a general image of contemporary physiographies approaching pain conduction, involving bottom-up projection maps (from peripheral induction to spinal mediation, to central integration), and top-down projection maps (especially central downwards regulation and medial-spinal modulation). The text is divided in three parts with a total of 10 charts. Part I offers a general view of the whole scenario, from induction (peripheral and central), including the inflammatory chemical ambiances and their impact on master pathways of overall salience, to cortical integration and evaluation, and downwards modulation. Part II deepens in contemporary advancements on transduction, at medullar levels, including central spinal transduction and interneuronal matrices at Rexed laminae, analysing their role in achieving a contemporary reading of the Gate Control Theory. Part III closes the text outlining a final interpretation on the role and context of pain-facilitating fibres, by presenting the evolution of nociception-related systems as fibres that would have developed sensitive to disintegration, in a close and reciprocal relationship with immune reactivity (especially primary inflammatory processes). This faces the problem of defining nociceptors inquired by the previous chapters, for away from resulting a trouble of being linguistically fussy with naming, it comes as a characterisational problem that affects the ontological recognition of what the fibre does, the proper understanding of how it evolved, and of the stressors it undertook specialisation towards. The problem with nociceptors triggers the final interpretation delivered at the end of this chapter in Part III.

The interpretation analyses C fibres's fibrogenesis in organisms diachronically (evolutionarily) observed from a systems biology standpoint, thus involving a 'Principle of Integrity': on the basis of recognising the organism's unity as an integrity, a cellular cooperative coral environment that is self-sustained on account of its interaction with a medium that provides mutual variations in a reciprocal relationship. The interpretation offers a plausible workaround, an alternative way of conceiving of these fibres as to assigning them a connectomic relevance of their role in sensing immune reactions (the case of inflammatory phases is introduced) acting in answer to a reciprocal interaction with their contextual cellular milieu given infringement of a Principle of Integrity: ie, these cells are interpreted to be prone to excite when the organism disintegrates, involving mutual interplay with immune, hormonal and vascular systems. This departure point would serve to build a Reciprocal Inflammatory Fibrogenesis (RIF) Interpretation for pain-linked fibre specialisation, in the hope it can serve to help to explain the matters underpinning problems on the specialisation of these fibres as an attempt at avoiding the over-attributive characterisational problem identified by QIII, §1, §2, and §3.

*B — Psychiatric-Epidemiological
Characterisations: Overflowing
Morbidities & Pain
(QIII, §5-6)*

Developing the themes proper of psychiatry, concerns on how to assess pain through critical patients as a circumstantial factor, a multi-systemic stressor and a clinical trait of proper psychiatric conditions, have triggered the nosological debate on the conventional diachronic validity of singularised diagnostic attributions in scenarios requiring of multifactorial analysis and prognostic values identification. Within the ambiance of pain-reinforcement, the concept of

morbidity is changing its utility, shifting irregularly through historiographical accounts on disorders, diseases, illnesses, madness, that are no longer structure-specific, and that face, thus, to new comorbidity and multimorbidity classificatory requirements.

The first chapter of this niche B, 'Overflowing Morbidities: Pain Reinforcement and the Value of Epidiagnosis' (QIII, §5), addresses the significance of this nosological difformation in a clinical, epidemiological and attributional chain of trust. The coexistence of several pathological conditions in the same patient, being fundamental to singularised or pluralised diagnoses and to his or her general clinical assessment, exposes a definitional, classificatory and epistemic challenge that has produced almost fifty years of medical and philosophical discussion, evoked variegated attempts at using comorbidity terminology in daily clinical language, and prompted significant criticisms on the validity of systematic, categorial disease classification. Since the 70's, the notion has been exposed to a good amount of transformations, growing a definitional reattunement to complexity and heterogeneity within medical and epistemic literature that is bringing deep consequences for the entire diagnostic practice and its research activities.

The gain of pain-associated conditions pairing with an index disease, or the presentation of a previously detected pain accompanied with peripheral diseases and disorders, usually introduces the psychiatric, emotional and interpersonal assessment of comorbid states in patients suffering from multiple diseases without a monographic cause. These, in the majority of cases, develop in processes of 'pain reinforcement', contributing to the worsening of a patient's life quality, personal apperception of harm, or his or her coping strategies with such a burden. Be that as it may, the opposite process is true for pain-bearing populations, where a preceding pain experience, usually sustained (chronified

pain experiences), is determined to cause-coadjuvate, degenerate or contribute to promote further comorbid diseases, continual and continued crises that foster a quite common involvement of mental disorders, interfering with diagnostic practices of identification and differentiation of symptoms. To the extent of this interpretation, it seems that the concept of 'epistemic overflow' shows an accurate tool to assess the blurrish problems that analyses face with multifarious, complex, heterogeneous diagnosis of comorbidities in neuropsychiatric studies and pain experiences theory making. This chapter covers the current neuropsychiatric panorama dealing with pain-associated comorbidities, addressing the 'epistemic overflow' introduced by comorbid states into clinical theorising, along with its implications for diagnostic practices, the assessment of pain experiences, and the organisation of diseases within systematised classifications. Divided in four points, the main text overviews the prevalence of pain-associated disorders; the major debates on defining comorbidity; and the discussions about the systematic, categorial and dimensional classifications of diseases. The last point of the writing reconsiders such diagnostic overflow, and outlines some conclusions on how the value of epidiagnostics can be of much use in giving form to future proposals improving the work in comorbidity and multimorbidity-driven clinical practices: this concluding remark wants to place a value on 'epidiagnostics', defining pluralised practices of diagnosing and adapting diseases classifications, that stress a better descriptive understanding of complex, multifarious, heterogeneous prognosis, and the deeper multifactorial, personalised assessment of patients.

Next chapter, 'Neuropsychiatric Dysfunctions Associated with Pain Reinforcement Comorbidities' (QIII, §6), approaches in a practical manner the specific neuropsychiatric pathological architectures that most often present with, or develop into, chained dysfunctional pictures.

The text composes a neuropsychiatric framework to observe comorbid states and overflowing conditions that worsen reciprocally with reinforced pain processes, leading to a clinical overview of plausible epidiagnostic characterisations. Patients suffering from reinforced pain processes usually acquire personal and interpersonal dysfunctions, coming down with several emotional re-attunements to their living phase, a change of attitude, of mind frame and, finally, agency and actions that ‘re-shape’ the activity of their nervous system and express through personality. Of especial psychiatric attention are mood de-consolidation (mood and character traits tend to change in pain-bearing people, affecting humour and the direct responses involved in the social, familiar, working or scholar roles they play), emotional-perceptive complications (pain thresholds tend to turn more sensitive), affective and evaluative difficulties (how they proceed to assess their experiences, life quality and social, friendship, familiar, labour and learning ambients) and self-judgment problems (eg, how pain-bearers produce self-beliefs: beliefs about themselves and their experiences attached to their clinical conditions and the collateral, implicated circumstances).

When tracing a diagnostic path for neuropsychiatric comorbidities affecting index diseases overflowed by pain reinforcing processes, factors are classifiable in multiple manners: there is no major taxonomic orientation to follow for organising comorbid gains, and many times sheer epidemiological or statistical prevalence accounts do not fit for particular diagnoses. Researchers show and discuss how, for each study, precise symptomatic classifications, and contextualised scales of comorbid factors and stressors (leading to clinical worsening and its diagnostic detection) have been created. In order to assist diagnostic detection, this chapter introduces a neuropsychiatric framework for interrelating such multifarious comorbid contributors, over-viewing some of the most common diseases af-

ected by, or being affecting pain reinforcement processes and emotional functionality. These are sorted by four epidiagnostic clusters, which have their epistemological fundament in QIII, §5, and are mainly driven by relational, multifactorial and prognostic values. They may help in finding neurotypical features during the diagnostic search and evaluation of the patient as key signals. Vulnerability factors for emotional comorbidities implying pain reinforcement and functional neurodestruction are also implicit values. The framework consists in the following four dysfunctionality clusters: I ‘Executive Attitudinal Dysfunctions’, II ‘Impotence, Worry & Habits Dysfunctions’, III ‘Affection, Mood, Character & Personality Dysfunctions’, and IV ‘Dysfunctions Related with Central Neurodegenerative Disorders’. Further neuropsychiatric frames delivering on this niche can tackle the different variations evaluation can adopt in approaching patient-specific cases, involving contemporary reflection on clinical characterisations as diagnostic practices of measuring (comparing to nosographical standards developed by theory making underpinning routines) and knowing (epistemic access), as studied in the following niche.

C — *Clinical Characterisations: Diagnostic Practices & Pain Measurement Strategies* (QIII, §7-8)

Exploring diagnostic practices from an epistemological standpoint results in sounding how contemporary clinical practices could understand the access to a patient’s pain experience, growingly guided by communal strategies of observation, attention, assistance and dialogue, favouring personalisation and recording of pathological traits for engaging a better descriptive further neuropsychopathology of pain-reinforcement overflowing comorbid scenarios. The first chapter of this niche C, ‘Epidiagnostic Assessment as Clinical Practice. Navigating Person-Centered Diag-

nosis in Neuropsychiatry' (QIII, §7), outlines how person-centered perspectives, implied in nowadays healthcare plural processes, influence diagnostic practices framing description and interaction through personalisation of standards. In regard to such movement towards pluralistic attention, some major factors of diagnosis are required to be revisited, taking into consideration its relevance as a communal practice. Facing a descriptive approach, this writing assesses how some newer epistemic architectures sounding the notion of 'scientific practice' —mostly from situated epistemologies (1960's–2000's and beyond), and especially calling on works by Philip Kitcher— can be applied to identify and describe this so-called 'epidiagnostic practice'. In such context, the main goal of this work is to serve as a revision of our nowadays pluralistic clinical behaviour. In three parts, the chapter exposes first in Part I an outline of how the person-centered perspective implied in healthcare plural processes influences diagnostic practices, accounting for three of its main aspects: 'situation dependence', 'patient proximity', and 'classificatory requirements'. Part II revises the notion of 'scientific practice' as portrayed by modern epistemologies to be applied to diagnosis, and concludes in Part III proposing a framework for helping in defining modern clinical performances, a suggestive definitional basis for framing the epidiagnostic practice of neuropsychiatric evaluation. In so doing, a plausible framework for describing modern clinical diagnostics is being offered.

As reviewed by the QII, §1, general assessment of patients's conditions draw in a practice of trusting diachronic knowledge along a synchronic circumstantial understanding that unfolds via instruments and measuring strategies evaluating the difference between the clinical case and the medical nosographical standard. The second chapter of this niche, 'Measurement Strategies: Assessing Pain Self-Judgements & Self- Beliefs' (QIII, §8), inquires how accurate

and modernised are these general instruments and strategies, in current use and of wide application in contemporary neuropsychiatric evaluation, for facing the contemporary overflowing exhibition of symptomatology given the modern nosological revision and involvement of up-to-date fresh technology applicable to a collaborative interfield engineering of descriptive pathological traits and case-behaving.

The clinical diagnostic of pain experiences and outgrowths, reinforced pain, pain-bearing processes and their consequences for further comorbid scenarios, is in no means distant to the same challenges that other diagnostic neuropsychiatric practices face: practices are subjected in great extent to the diagnoser's performing the interpretation of pathological traits (specific symptomatology contextualised to the patient at case) and pathological architectures (socially and scientifically accepted diseases, health complexities, conditions, disorders... instantiated by patients). Such guesses are guided by his or her experience and savvy, estimated through comparison among many similar cases, and involved in case-to-case decision making patterns. In other circumstances, when personal qualitative introjection and projection are introduced with-the-patient in such guesses and interpretations, 'interoperative' (normative, measurable) clinical diagnoses occur, and tend to be informed by the patients's performance on several tests, analyses, scales and interviews, which are multifactorial, scored, ranked, situated (to nationalities, gender, age, further diseases, etc.), and that shall be validated and accepted by scientific communities in order to function as helping tools for any diagnosis to be resolved. Interoperative normative diagnostic processes, involving patients's decisions, show numerous leading major aspects to future enhanced diagnostic practices (Cf. QIV, §1: results and conclusions of this thesis), including assessment of trust, interpersonal behaviour, flexible standardisation and contrast, plus case-to-case

decision making protocols, personalised attentive care, and prognostic tracking over multifactorial niches of stressors increasing morbidity, both co- and multimorbidity risks (Cf. QIII, §4 and §5).

In the recognition of such clinical factors, the chapter navigates the main diagnostic tools for assessing beliefs and judgements on pain experiences, outgrowths, pain-bearing processes and plausible comorbid complications. Three main clusters have been developed for accounting pathological trait specifications, a 3-fold cluster frame that gathers a total of 15 topics facing measurement strategies challenges. Topics do not exhaust any list of measurement tools, however can be presented as a guide to generally reviewed, in-use major utilities in the field. These clusters form the three parts of the work: Part I, 'Wide-Range Assessment of Pain Beliefs', reviewing the main tools for measuring neuropsychiatric pain-specific traits in different clinical circumstances; Part II, 'Assessment of Pain Bearing & Outgrowths', exposing some of the main tools in use for measuring pain display, consequences, coping processes and dysfunctionality values; and Part III, 'Comorbidities-Oriented Assessment of Pain', facing challenges in comorbidity scenarios, describing some of the main diagnostic tools that may be used for accessing the prognostic neuropsychiatric factors epidemiologically associated with dysfunctions derived, or co-causing, pathologies. These clusters, informing proper use of instruments to measure others's pain experiences, open the path to a determinant epistemic interest on personal and interpersonal characterisation of experiences, for this belief, enriched by the considerations, narratives, memories and pragmatic accounts explaining the private immediate experience being felt, will be the data delivered on the interoperation patient-instrument and patient-physician. The next niche, on the difficulties and barriers of pain transference, will address the philosophical inspection on the

matter in application to both, clinical decision making in assessment practices, and in its effect on medical data engineering.

D — *Interpersonal Characterisations:
Difficulties on Self-Narratives &
Pain Transference*
(QIII, §9-10)

When the diagnostic process is understood as a plural performance of different agents involved in an ambiance of recognition, identification, attribution, attention and prediction, clinical evaluation is readable as an interpersonal (trans-organic) action working with suitable factors and phenomena in the scene that are not proper to all the actors involved, inasmuch as these are just proper to the organic resolution of the patient. In other words, interpersonal evaluation makes epistemologically relevant to talk about beliefs upon themes that need be imagined, simulated, virtually engaged by others as for them to be dealt with, oriented, attachable to a clinical notion, and confronted with a standard. This process of responsibility, or linguistic pragmatic accountability, recalls on healthcare institutions, diagnosers, patients and patients's environments, and instrumental usage for developing trustworthy medical characterisations. Actualising those concerns, interpersonal evaluation needs to worry on how self-narratives, of patients exposing their own experiences, unfold valid or relatively valuable to diagnostics and therapy endeavours, and, likewise, how transference of trusted knowledge can be put to work interpersonally on the basis of empathetic and contextualised spaces of understanding.

The first chapter of this niche D, 'Barriers in Self-Assessment of Pain & Its Comorbidities: Indetermination in Self-Beliefs & Narrative Perspectives' (QIII, §9), examines how pain-bearing patients's inability to discern a proper definition of their own pain experiences, and further conditions comorbid to it, affects clini-

cal self-assessment. Indetermination in the patients's reports acts by blurring the characterisations of pain and comorbid conditions that they may offer to physicians and evaluatory instruments when asked to explain and reflect about their own current emotions, given the case that they might feel, as an usual report, seemingly contradictory experiences. This problem presents especially when dealing with personalised diagnostics incorporating interoperational feeds (Cf. QIII, §8), as they involve relations of the kind patient-physician, patient-instrument, patient's ambience-physician, etc. Indeterministic assessment can occur in 1st, 2nd and 3rd phases of neuropsychiatric multifactorial evaluations (Cf. QIII, §6 and §8), leading to general biases and to relatively weak practicality in dysfunctional and dysexecutive populations: sometimes patients, due to cognitive or dysexecutive dysfunctions comorbid to pain scenarios (Cf. QIII, §5), can generate beliefs upon themselves (self-beliefs) containing contradictory, opposed, seemingly unmatching feelings, that are reported by means of different narrative points of view, multiple focuses that guide the patient's discourse exposing how he or she acts and feels, along with certain reasons for having acted and felt in a particular manner in other moment.

In regard to therapy theory, indetermination introduces patients's inability to defend a specific continuous narrative, prompting their self-evaluation of pain and comorbid conditions with a past, futurable or possible scenario of feelings valued with the same trust as actual ones. This provokes uttering pragmatic accounts (the way the patient uses utterances and propositions for justifying or responding for the contents of such) where no singular identification is able to be reported: rather the principle of relevance is broken, or both characterisations are relevant to the patient for accounting for what he says he believes is experiencing. Such accounts would function via self-narratives that may not seem to be justified to the therapist as conveyed on

account to both, present and non-present feelings, for the patient is incapable of 'characterising through' (to determine) a single mindset, consequently impeding a continuous identification of his experiences, emotions and feelings, and of the orientation of those feelings towards something, someone or certain situation.

In this work, indetermination is suggested to have an epistemological interpretation, formalised through propositional logics for self-beliefs. This presents the case for exploring 'indeterministic self-beliefs' in defining how the subject may hold such perspective narratives. Applying Peter Lawrence Goldie's general perspective theory, the question raises to investigate where and how patients put trust on when asked for reporting their experience. The aim of this chapter is to define an analytical description for explaining why and how this indeterministic circumstance comes to be propositionally possible, in order to clarify the processes that allow a patient to report a 'conflicting double feeling' —two seemingly incompatible or asymmetric experiences (eg, to feel pain and to feel relief) felt at once— that blurs the production of a proper self-assessment. Formalised as propositional epistemic beliefs, both beliefs will get to the point in which the subject may put trust on both at the same time: it occurs that the subject finds no manner by which to determine what he is actually feeling, emerging an indeterministic self-belief.

The next and final chapter, 'Transference of Trusted Knowledge on Pain by Contextualising Empathetic Perspectives' (QIII, §10) explores the field of cognitive ergonomics in its implications to medical information theory and clinical epistemology. This involves the sequence of common distribution, protection, sharing protocols, management, trust activities and decisions as regard to many participants in the movement of clinical data, including relationships of the kind patient-physician, patient-instrument, physician-instrument, phy-

sician-physician, etc. This work examines how transference of self-beliefs on pain is performed from pain-bearers to analysers, how the second assess external beliefs, and can trust on shared knowledge from a naturalised, contextual, perspective epistemological standpoint.

The idea behind the topic is that experiences are, yet to the contemporary exploration, unable to be transferred: one would not be able to experience the pain of any other self. Beliefs, however, or their contents, are constantly being communicated, exchanged: by being shown through behaviour, linguistic patterns, meaningful images, or pragmatic accounts as utterances and speech acts, they form our principal means for evaluating others's experiences, informing valuable knowledge.

Bringing the issue into a belief-&-action-based framework, it is expected to enhance the way clinical recognition, characterisation and assessment is carried out. In a medical sense, beliefs are constantly being subjected to transaction, in which two or more parties agree on trusting given or extracted information to become, for instance, diagnostic criteria, epidemiological data, standards, or case reports. The chapter chases a definitional effort in answering how are we able to define that such a transference is actually being of trusted knowledge (of contents of beliefs that manifest actual 'felt pain'), instead of entirely simulated knowledge (of contents of beliefs on several characteristics of pain, but that do not manifest a phenomenon as enriched as 'felt pain' would be experienced). As an integrative proposal binding social, plural, perspective epistemologies with propositional logics of self-beliefs, the work provides a protocol for introducing trust in assessment processes, regarding transference of experience-based self-beliefs even when the analyser may be holding a simulation in his or her belief about the analysed subject's experiences. Introducing perspective beliefs in a theory of the style this chapter is dealing with, plural cluster

compositionality (of public and private traits composing the contents of beliefs) may be used for accrediting partial value (as regarding to the formation of 'partial simulations' in the belief of the analyser, solving the problem of total simulation: Ideal Pain; Cf. QIII; §1-3). The proposal also allows for its embedment into a propositional belief as content with traits (which may instantiate attitudes, orientations, intentions, pragmatic addressivity, and forms of public conventions and private dispositions into the very belief of the subject), as well as its transference and its plausible options for solving the identification process that serves for an external analyser to discern through empathetic agreement what is the suitable evidence that makes the experience of an external subject to be transferred with sense. There is a hope this proposal could help in providing methodical and theoretical tools in order to build increasingly better instruments —applied into clinical ergonomic systems in Artificial Intelligence Assisted Diagnostics, thick-and-thin Big Data contrast, text and qualitative analysis, and blockchain clinical interoperational systems of diagnostic management— for measuring self-beliefs on pain and other complex experiences of diagnostic use.

