

A Epistemologia da psiquiatria
The Epistemology of Psychiatry

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A EPISTEMOLOGIA DA PSIQUIATRIA

A psiquiatria surgiu como um ramo da medicina que pretendia explicar cientificamente os factos e os fenómenos objetivos das doenças denominadas mentais (e com base nesses novos conhecimentos) desenvolver curas racionais. A psiquiatria necessita de um período de calibração. As auditorias e a investigação contribuem para essa calibração. A psiquiatria inclui uma componente clínica e uma componente epistemológica. A epistemologia audita a fração conceptual da psiquiatria, a história, a filosofia e a investigação empírica constituem as principais ferramentas da epistemologia. O modelo atual do sintoma mental teve origem no século XIX e a construção dos sintomas mentais nunca está terminado.

Palavras-chave: psiquiatria; história da psiquiatria; epistemologia da psiquiatria

THE EPISTEMOLOGY OF PSYCHIATRY

'Psychiatry' presented itself as a branch of medicine seeking scientifically to explain the causes of objective phenomena and facts called 'mental diseases' (and on the basis of such new knowledge) to develop rational cures. The psychiatry needs periodic calibration, auditing and research contribute to calibration, psychiatry includes a clinical and a conceptual component, epistemology audits the conceptual frame of psychiatry; history, philosophy and supervised empirical research provide the main tools of epistemology, the current model of mental symptom originated during the 19thC, and the construction of mental symptoms is never ending.

Keywords: psychiatry; history of psychiatry; epistemology of psychiatry

L'ÉPISTÉMOLOGIE DE LA PSYCHIATRIE

La psychiatrie est apparue comme une branche de la médecine qui cherchait à expliquer scientifiquement les faits et les phénomènes objectifs des maladies appelées mentales (et à partir de ces nouvelles connaissances) afin de développer des traitements rationnels. La psychiatrie a besoin d'une période de calibration. Les audits et la recherche contribuent à cette calibration. La psychiatrie comprend une composante clinique et une composante épistémologique. L'épistémologie audite la fraction conceptuelle de la psychiatrie, l'histoire, la philosophie et la recherche empirique sont les principaux outils de l'épistémologie. Le modèle actuel du symptôme mental est né au XIXe siècle et la construction des symptômes mentaux n'est jamais terminée.

Mots-clés: Psychiatrie ; Histoire de la psychiatrie ; Épistémologie de la psychiatrie

Introduction

Psychiatry (the old trade of 'alienism') is a new discipline. It was constructed during the 19th century under the aegis of medicine. Like all historical events, its foundation was assisted by contemporary assumptions, aspirations and a myth of origin. 'Psychiatry' presented itself as a branch of medicine seeking scientifically to explain the causes of objective phenomena and facts called 'mental diseases' (and on the basis of such new knowledge) to develop rational cures.

Since its inception, therefore, Psychiatry has presented itself as a rational, philanthropic, scientific and ethical enterprise carried out by medical doctors to alleviate abnormal behaviours causing untold suffering to mankind and resulting from (obvious) disease of the brain. The latter existed in the heads of sufferers and totally independent from psychiatry itself which ex-hypothesis could not participate in its construction.

This received view also states that psychiatry has accumulated a large body of knowledge about the cause, cure and management of mental diseases. This would be even larger were it not for the stigma, prejudice, and funding difficulties of which both psychiatrists and patients have been victims. This notwithstanding, psychiatry has managed to keep up to date, and with the help of (inter alia) genetics and neuroimaging techniques it has reached the position that it is now matter of short time before the cause of schizophrenia, manic depressive illness, and the rest of mental disorders is identified.

Epistemology, on the other hand, is conventionally defined as a discipline that deals with the origin and legitimation of knowledge. There is a variety of epistemological approaches but the most popular in the dominant Anglo-Saxon culture of our day is the one that studies the 'successful' sciences (such as physics, chemistry, mathematics) to find out what logical and theoretical methods and structures are responsible for their success and proceeds to apply them the rest of 'sciences' (e.g. the human or social sciences). In this sense, the epistemology of psychiatry would state that the closer the inner workings of psychiatry come to those of the successful natural sciences the higher the probability that her knowledge is good and true. Epistemology is thus a justificator of the natural sciences.

There are, however, others ways of doing epistemology. For example, it can be defined as a form of audit of concepts and knowledge. In this case, epistemology at least tries to remain independent from the objects that it purports to audit. For example, it does not start by assuming that a particular science (e.g. physics) is by definition the most successful in its quest for 'truth'. It will ask for the basis for this belief, for the hidden role that concepts play in the formation of knowledge, and for how theory-laden the latter is. In order to achieve this aims, epistemology has to adopt new methodologies (e.g. historical, empirical, etc.) which are well beyond of conventional logical analysis of concepts and theory-formation. In summary, epistemology asks after the role of 'non-cognitive' factors (e.g. economics, politics, social) in the formation of 'pure' and objective scientific knowledge.

The application of this type of epistemology to psychiatry is far more interesting and useful to patients, researchers and clinicians alike than the conventional one. More 'useful' means here 'closer' to the needs for auditing and vigilance that psychiatry badly needs. The fact that this form of epistemology makes no assumptions as to the 'truth' of current psychiatry, makes it 1) a freer and more ethical enterprise for it may show how what on the

surface appears as a 'pure' and uncommitted science is in fact a deeply compromised activity; and 2) it opens the minds of psychiatrists to alternative or parallel discourses which may also benefit patients which, after all, are the ONLY *raison d'être* of psychiatry.

Starting from the beginning

Human culture embraces disciplines that deal with the structure of natural objects (e.g. gold, dogs, clouds, atoms, human beings), with the meaning and behaviour of artificial or theoretical objects (societies, revolutions, syntax, virtue, beauty, ethics, semantics, etc.); or with both tasks combined (psychiatry).

The disciplines dealing with the structure of natural objects (physics, chemistry, biology, etc.) are currently called *natural sciences* and are privileged by many as the purveyors of truth about the world. Those which deal with ideal objects (sociology, history, linguistics, philosophy, etc.) are called *human sciences* and in the current world tend to be considered as less important than the natural sciences. This disdain has split the ranks of their practitioners: some, to regain prestige try to ape the methodology of the natural sciences (e.g. quantitative methods); others, fortunately, still affirm the hermeneutic uniqueness of the human sciences.

Disciplines partaking in the natural and human sciences are called hybrid disciplines and their conceptual status tends to be confusing. Psychiatry is a typical example because 'madness' (or mental disorder or whatever name is given to its object of inquiry) is not found as an object in nature (like gold or horses) which has somehow preceded the arrival of the human race. Madness is something whose very existence (construction) depends upon prescriptions and decisions which are NOT part of the physical world. Indeed, its existence depends upon certain social agents deciding that behaviour of some other human beings is 'disordered'.

Of course, once such decision has been taken experts in the brain representation of human behaviour will move in and (not surprisingly) find out that such behaviours do have brain inscription. The order of events, i.e. the fact that the biological follows the conceptual tends to be hidden from view. This concealment has encouraged the 'naturalization' of mental disorder, namely, the claim that the mental disorder is not the description or meaning of the disordered behaviour but actually its brain inscription (*simpliciter*). This is as fallacious as reducing the beauty of a classical painting to the particular distribution of pigments and material in space.

It follows that the correct understanding of mental disorders must be based both on a study of their *epistemology* (how they are constructed, captured, known, etc.) and their *ontology* (how they are defined, what they consist of, what their structure is). This chapter is about the epistemology of psychiatry, namely about the theory of knowledge that informs the construction of its objects of inquiry.

Like the rest of disciplines encompassed by human culture, psychiatry has three components: frames, contents and prescriptions. The *frames* are assumptions and theoretical devices ordinarily invisible to the naked eye and which constitute the foundations of the discipline. These are rarely talked about and provide the common ground on which ordinary empirical research takes place. The *contents* of psychiatry relate to its descriptive psychopathological claims. Typical examples are verbal profiles, definitions, etc., of elementary

objects (delusions, hallucinations, retardation, etc.) or compound objects (schizophrenia, mania, etc). As empirical research expands, the network of relationships and claims grows, mostly based upon statistical correlations. These give psychiatry her predictive edge and allow her practitioners usefully to help people in distress. The *prescriptions* are norms or moral guidelines for actively intervening and treating, sometimes without the subject's consent. These moral warrants are hidden under the said statistical correlations so that it appears as if they are dictated by the 'science of psychiatry' and not by social agents on behalf of society.

In other words, the issue here is the difference between *what is* and *what ought to be*. It is very important to realize that the 'description' of symptoms and disorders of psychiatry (from psychopathology to brain imaging) cannot entail a 'prescription' (i.e. what it ought to be, what we must do to other human beings exhibiting such behaviours). Prescriptions cannot be deduced from descriptions for they arise from different orders of logic and society. The IS comes from the descriptions of science; the OUGHT from what society wants to do about the predicament of some human beings.

What is epistemology?

Although the term epistemology is relatively new (it was only coined in 1854), the concept to which it refers is ancient. Human collectives have from very early on asked about the origin of their 'knowledge' about how it is possible for human beings to know what they know. 'Knowledge' is here defined in the broadest sense as the set of narratives, beliefs and claims passed on from generation to generation and which has allowed such collectives successfully to survive in the world. In the Classical epistemologies, God may have imparted such knowledge piecemeal or wholesale. For example, in the Platonic view knowledge was 'remembered' (via anamnesis) because souls (now imprisoned in bodies) had once shared it with god. Aristotle, on the other hand, saw knowledge as something which human being obtained piecemeal. Later epistemologies (e.g. the Christian one) has therefore oscillated between these two poles (Agustin versus Aquinas).

With the secularization of Western culture divine explanations no longer sufficed. The work of all the great Western philosophers, at least since the time of Descartes, has to certain extent revolved around epistemology. Whether privileging the structure of the world or of the person (i.e. their perception, intellect, or memory) the question has been what renders knowledge steady, lasting, true, etc. For example, for Kant the *noumena* (the essence of the world) was unknowable and beyond human reach, all that could be known were phenomena captured on the basis of specific mind frames and structures (the categories). To the supporters of the Scottish Philosophy of Common Sense the mind of man was perfectly adapted to the world and hence knowledge was guaranteed.

The question of the nature of 'truth' has thus been central to such debates. One of the earliest theories was based on the claim of a tight *fit* between what the person believed and reality. This *correspondence* theory of truth has been challenged as there is no way to ascertain it. Alternative theories are based on complex *coherential* models in terms of which a statement would be truth not because it depicts a state of affairs in the world but because it is coherent with other statements within a particular episteme or cultural niche.

What is psychiatry?

Psychiatry is a discipline that deals with the understanding and management of the phenomena now called 'mental disorders'. Understanding in this context refers to the intellectual / emotional / aesthetic apprehension of the history, meaning, biology and context of mental disorder. After the 1810s, 'alienism' (the old name for the discipline that dealt with *mental alienation* and was practiced by many agents in society) came under the aegis of medicine and this association has moulded its professionalization and practices ever since. The duration of this alliance, however, remains uncertain. One thing seems clear, to wit, that its future (and possible) dissolution will not be determined by scientific research ('knowledge') but by complex socio-economic factors, that is, by decisions taken by governments in terms of broad social and economic needs.

Psychiatry partakes in the human and natural sciences. The former tell it about the reasons, meanings and contexts of mental disorder; the latter about its putative brain addresses and causes. It is essential to remember the correct sequence here. It is the human sciences that *configure* the object of psychiatric inquiry. Once this has been completed the natural sciences move in to seek links between these semantic configurations and the body. The findings of the natural sciences (i.e. the brain inscriptions of the configurations) cannot by themselves produce definitions of mental disorder. A good example of this is the 'disease' status of homosexuality. During the second half of the 19th century it was considered as a serious mental disorder (for example, Krafft-Ebing and Kraepelin were strong defenders of this view). The impact of Freud and others blurred this perspective but the renaissance of biological psychiatry after the Second World War resuscitated the disease view and led to homosexuality being listed as a disorder in the earlier version of the DSM series. All along, putative biological concomitants of homosexuality were reported but these 'markers' have never participated in the decision as to whether or not it is a 'disorder'. This decision was always taken on the basis of social, moral or economic arguments. Indeed, it would be very difficult to see how such markers could incline de balance one way or the other. The same can be predicated of other forms of mental 'disorder' except that in some cases the social decisions are less obvious. The general problem here is that finding of replicable brain inscriptions or markers for any mental disorder immediately draws attention away from the fact that the original definition and decision to medicalize the said disorder was social in origin.

This *sui generis* epistemological status makes psychiatry different from other medical specialisms. This difference should govern the way in which it is taught, researched upon and practised. Unfortunately, this is not happening, and often enough the teaching and research component of psychiatry are being (wrongly) based on the mores of surgery or general medicine.

It follows from what has been said above, that only an integration of semantics and neurosciences can lead to an understanding of people thought to be 'mentally disordered' and to generate the required management strategies.

What is the epistemology of psychiatry?

The origin, duration, and legitimacy of psychiatric 'knowledge' is the main concern of the epistemology of psychiatry. Conventionally, these questions have been dealt with by the epistemology of medicine or of general science. Solutions thus found are bound to be inappropriate or incomplete. This because psychiatry is a hybrid discipline in which the origin, organization and justification of its knowledge base has varied sources, some of which, in fact, remain obscure or unknown. It would be naïve to say that psychiatric knowledge only issues out of important 'research papers' currently handled by complex meta-analytic databases (e.g. Cochrane) in charge of distilling and selling 'knowledge' to users and practitioners. The epistemology of psychiatry states, therefore, that psychiatry has its own problems (not resolved by a generic philosophical approach) and that these require a regional (as opposed to) a general epistemological approach.

The fact of the matter is that psychiatric 'knowledge' is far more than replicable correlations (often enough misinterpreted as cause-effect relationships). Indeed, an important input into what mental disorder is comes from deeply ingrained beliefs and norms belonging in the Folk psychology and psychopathology of the ages. These provide the hidden bedrock on which the correlational edifice has been built. Concealed by the veneer of correlations taught during psychiatric training, such beliefs often surface when in the intimacy of the doctor-patient relationship, the clinician is confronted with a patient who is not responding to 'correlational' explanations. Having (often rather quickly) run out of these data (which nowadays patients and their relatives can easily download from the Internet), the psychiatrist must nonetheless continue with the dialogue. It is in this situation that the multiple explanatory narratives of Folk psychology come aflower. Hence, it should be a sobering exercise for all psychiatrists to calculate the percentage of statements he/she has made to patients for which there is no 'evidence' whatsoever.

The fascinating thing about this hidden and un-evidenced dialogue between doctor and patient is that it works, that is, it contributes to the patient 'getting better' (i.e. it has good therapeutic value!). The evaluative methodology applied to treatment efficacy (whether cognitive behaviour therapy, psychopharmacology, psychosurgery, etc.) rarely if ever takes into account this hidden component. To say that it is 'controlled away' by the use of control groups is not sufficient as it is very difficult statistically to ascertain its magnitude and interaction with a given treatment. At any rate, this relates to a more fundamental issue in the history of medicine (the so-called 'Rosemberg question') which explores the intriguing prospect that throughout history ALL medical treatments seem have been efficacious, at least, in terms of the 'law of thirds' (still valid nowadays): one third of patients recover, one third improves, and another becomes chronic.

Taking all this into account, it seems clear that in order to ascertain the origin, nature and validity of psychiatric knowledge, the epistemology of psychiatry must develop its own combination of methods which, as we have suggested above, should include history, philosophy and empirical research. The history of psychiatry provides information on the social processes within which the objects of inquiry have been constructed; the philosophy of psychiatry clarifies the descriptive and definitional power of the language of psychiatry, and empirical research *calibrates* the new definitions against reality.

Calibrating the language of psychiatry

All disciplines need periodic calibration. Calibration consists in matching the resolution power of the language of description with that of the objects of inquiry. This process increases the capacity of the discipline to capture relevant phenomena. 'Relevant' are phenomena whose knowledge increases the epistemic and predictive capacity of the discipline. The mode of calibration will depend upon the conceptual format of the discipline (e.g. whether it is hybrid or not). Being a hybrid discipline, psychiatry poses specific problems and hence it is incorrect to try and import methods from other disciplines. The best way is for practicing psychiatrists to train in philosophy and epistemology. Experts in these fields who have no 'knowledge by acquaintance' of the objects of inquiry of psychiatry can rarely contribute to our subject.

Calibration is based on auditing and research. Conventional auditing and research deal with the clinical component of psychiatry, that is, with the manner in which the putative contents fit into the conceptual frames. But the semantics and coherence of the frames themselves need also exploring. This auditing of the frames is called epistemological auditing. It can be internal, when carried out by psychiatrists or external when undertaken by philosophers. Both have advantages and disadvantages. External auditing is independent, technically competent but often it is bereft of knowledge 'by acquaintance'. Internal auditing can be cavalier and lacking in technical expertise.

Epistemological auditing endeavours to deal with questions such as: What is the nature of psychiatric knowledge? Where does psychiatric knowledge originate? What are the sources of psychiatric knowledge? How legitimate is psychiatric knowledge? How stable and enduring is psychiatric knowledge? Is the language of psychiatry value-free? There is no space in this chapter to try and answer any of these questions. Suffice it to say that active research is being carried out into these issues at the Cambridge School and in other places.

One finding, however, is clear, that empirical research in psychiatry has so far afforded a low yield. It is the task of epistemology to find out whether this failure is due to an intrinsic opaqueness of subject-matter, to an inadequacy of current research techniques or to the epistemic limitations of the current language of psychopathology. Since accepting a permanent opaqueness of subject matter (like the Kantian noumena) would lead to a pessimistic attitude, we need to pursue the other two possibilities here, namely that the issue is one of inadequacy of methods and of language. In this chapter we will briefly deal with the inadequacies of language. As has been mentioned above, descriptive psychopathology (DP) compiles and interprets social phenomena and makes them available to psychiatry as data. Psychiatry is blind without DP. The validity of all research data in psychiatry indeed depends upon the epistemological capacity of DP.

The current version of DP was constructed before 1900. Its resolution power was calibrated according to the epistemological requirements of contemporary clinical practice & research. It has changed little since. Mental symptoms became the 'atoms' or 'unit of analysis' of DP. Following secular changes affecting the biology & sociology of mental symptoms DP has lost calibration and this would explain its current inadequacy. The latter has been magnified by the fact that current research methods (neuroimaging, genetics, psychopharmacology, etc.) have higher resolution needs and this has rendered DP data coarse-grained & inefficient. This suggests that the solution to the current

inadequacy of the language of psychiatry is not launch forth and blindly undertake ever more expensive 'empirical' research using ever larger samples. The solution is to re-calibrate the language of psychopathology so that the resolution power of descriptions is increased. But it is also time that mental symptoms be considered as the primary objects of research and testable models of symptom-formation were developed. This because most of current psychiatric 'diseases' are constructs (probabilistic clusters) put together in earlier historical periods and hence carrying with them contemporary biases and prejudices. In this sense, it can be said that it is highly likely that the conventional 'mental diseases' do not exist; what exists and makes people suffer is complaints and symptoms which have absolute reality and must be studied from the conceptual and empirical viewpoints.

The epistemology of mental symptoms

It is the convention in Western cultures to diagnose a mental disorder on the basis of patterns of behaviour, subjective mental complaints, and 'objective' signs. The current predominance of diagnostic menus and algorithms together with the belief that all mental symptoms have now been mapped, has created the interesting situation that younger clinicians are at a lost when faced with complaints not present in the official lists. A common response to this situation is either disregard the complaints or fit them into an official complaint. For example, cold and blue extremities or tachycardia would be disregarded as relevant to the diagnosis of schizophrenia; and the reports of complex changes in the perception of time occasionally reported by patients with temporal lobe epilepsy are not uncommonly redefined as 'depersonalization'.

Another consequence of the algorithmic diagnostic approach alluded to above has been the disenfranchisement of a variety of physical and mental complaints, and the loss of the descriptive and epistemological skills. It is interesting to remember that before 1900, physical symptoms and signs such as headache, abdominal pain, seizures and tachycardia were taken *ad verbum* and duly included in the definition of mental disorders. This started to change around the turn of the century after the creation by Freud of a new conceptual space for mental disorders; soon enough, the old somatic complaints began to be explained as 'secondary' to psychological mechanisms; for example, palpitations, whistling in the ears, or the dizziness of agoraphobia (which before Freud had been considered as a disorder of the inner ear) were all re-conceptualized as 'secondary expressions' of somatic anxiety.

The same historical process led to changes in the way in which mental symptoms and physical disease were thought to relate. Up to the early 20th century, the Kraepelinian view predominated that medical conditions gave rise to *specific* mental symptoms (through whose presence the underlying disorder could be diagnosed). As against such view, Bonhoeffer claimed that the brain or mind's repertoire consisted in just two or three (stereotyped) mental disorders; and that any could be triggered by any medical disease. In consequence, by the 1920s the belief that mental symptoms were rarely (if ever) a pathognomonic component of a medical disease had been accepted. This lasted well after the Second World War: for example, during the early 1980s reports that delusions and hallucinations might be primary and defining features of some forms of dementia were still being rejected. The interesting issue here is that such rejection was not based on empirical research but on the

conceptual belief that delusions and hallucinations in the context of dementia *had* to be the expression of a concomitant delirium.

These conceptual shifts have influenced the way in which mental and physical symptoms are perceived by physicians and psychiatrists, particularly those working in general hospitals. The use of clinical tests as diagnostic criteria for some medical disorders provided further reasons for doubting the ‘genuineness’ of physical complaints which were not vouchsafed by a biological marker; for example, the concept of ‘pseudo-seizure’ was additionally firmed up after changes in the EEG were considered as ‘definitory’ of epilepsy.

These major changes in the definition and epistemic value of mental and physical symptoms would be difficult to understand without discussing ‘symptom-formation’.

Cambridge model of symptom-formation

There is no space in this chapter to discuss in detail the Cambridge model of mental symptom-formation (see Berrios & Marková, 2002 for a full analysis). Suffice it to say that according to our model there are (at least) four pathways for symptom-formation, the commonest being pathway a (see figure 1 & 2). The model conceives of mental symptoms as ‘biological signals’ (resulting from a variety of causes) which upon entering consciousness cause pre-linguistic and pre-conceptual experiences (‘primordial soup’) leading to consternation and perplexity. To make them effable and reportable the individual needs to format these experiences. This is done by means of complex personal, familiar and cultural configurators.

Thus although all mental symptoms have biological basis, the model privileges their configurational wrappers for these give them form and expression and allow for them to be communicated. This means that one specific signal can be diversely configured and give rise to different symptoms (and viceversa, i.e. various signals can be configured into the same symptom). The Cambridge model also postulates that although all mental symptoms have cerebral inscription / representation they habitually ‘inhabit’ a semantic rather than a cerebral space. This semantic space is created and made possible by the symbolic and metaphorical capacity and activity of human language.

The model also predicts that mental symptoms may have primary or secondary representation / inscription in the brain. This distinction has important implications in regards to the interpretation of research into the neuroimaging of mental symptoms. Primary representation refers to cases where the brain signal issues out of an original, primary lesion or malfunction and upon penetrating awareness causes an experience which need to be configured to be communicated. Secondary brain inscription, on the other hand, refers to the situation where the symbolizing activity of language will have re-formatted a ‘primary’ mental symptom giving rise to some other mental symptom. This reformatting, like any other behavioural activity, will be also inscribed in the brain but the resulting inscription will have a different meaning.

Thus, primary and secondary inscriptions constitute entirely different mental and brain states. Whilst primary inscriptions should be long-lasting, replicable and aetiologically informative, secondary inscriptions are likely to be ephemeral and carry no information on the ‘aetiology’ of mental symptoms – i.e. correlations based on secondary inscriptions are of little practical use. The problem at the moment is that we do not know how many mental symptoms belong into the first and second category.

The future

The epistemology of psychiatry is a new specialism within psychiatry and hence it is still going through a constitutive and normative process. The former concerns both its terms of reference and the professional profile of its agents, i.e. who should carry it out. The latter concerns, so to speak, the rules of engagement, that is the when, how, and why of the epistemological activity itself. It seems clear that overemphasis on empirical research has led to a neglect of the concepts themselves. This must be put right. One expects therefore that in the future epistemologists must be part of research teams as blind and thoughtless empirical research is expensive and wasteful.

The following can then be concluded: that psychiatry needs periodic calibration, that auditing and research contribute to calibration, that psychiatry includes a clinical and a conceptual component, that epistemology audits the conceptual frame of psychiatry, that history, philosophy and supervised empirical research provide the main tools of epistemology, that the current model of mental symptom originated during the 19thC, and that the construction of mental symptoms is never ending.

Lastly, it can be claimed that mental symptoms are complex constructs where relatively simple biological signals undergo deep semantic configuration. It is likely that one signal may be configured into different symptoms and that different signals may give rise to the same symptom. This would notably diminish the aetiological and therapeutic relevance of the corresponding brain inscriptions which although always present would often be trivial (i.e. secondary inscriptions are aetiologically unimportant). This means that biological psychiatry cannot have it all its way, that a powerful semantic theory of symptom-formation is needed, and that the correct therapeutic approach should be grounded on both biological correction of the biological signal and semantic reconfiguration of the primordial soup.

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Figure 1

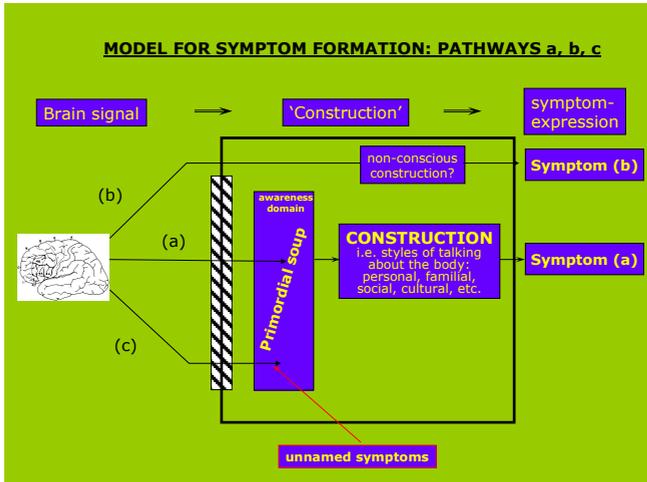


Figure 2

