

Exploring the Role of Psychotropic Drugs in Psychiatric Diagnosis: An Actor-Network Perspective

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Abstract

This article examines the production of psychiatric diagnosis in biomedicine, because studies, especially empirical ones in this field, have attracted little attention from researchers. The widely accepted assertion that diagnosis is the result of clinical judgment will be discussed. Through a case study carried out in a hospital in Barcelona, we will propose that psychiatric diagnosis is not only the result of a clinical judgment, but also of a psychopharmacological translation. Using actor-network theory and the notion of boundary objects developed by Star and Griesemer (1989), we maintain that psychotropic drugs as boundary objects act as central mediators in knowledge management, establishing the semiotic-material assembly of the diagnosis.

Keywords: psychiatric diagnosis; biomedicine; border objects; psychotropic drugs

Introduction

According to Joanna Moncrieff, the concept of diagnosis in psychiatry entails an equality between psychiatric classification and the process of medical diagnosis with the entailment that psychiatric problems are originated by a physical dysfunction (2010). However, researchers have been unable to identify an underlying physical process in psychiatric disorders since the inception of the field; diagnosis therefore remains a controversial issue. Several studies have described the complexity and fragmentation of diagnosis in medicine (Blaxter, 1978; Bowker & Star 1999; Mol, 2002). Many endeavors have been made to

overcome the vulnerability of diagnosis in medical practice. Evidence-based-medicine attempts to address the heterogeneous situation integrating in clinical settings the best available clinical evidence (Sacket, Rosenberg, Gray, Haynes, & Richardson, 1992). However, these attempts to strengthen the scientific approach of medical practice have not succeeded in eliminating the uncertainty that has characterized the practice of psychiatry from its outset. This handicap is more visible in psychiatry than in other medical fields, prompting a clinical discourse about the definition of diagnosis. During the current research, we have observed a general agreement that psychiatric diagnosis is the result of clinical judgement, despite the different approaches among psychiatrists. This widely accepted and pivotal statement shapes, as a matter of fact, psychiatric discourse in both the medical and biomedical field. Within this discourse, however, little attention has been paid to the transformations that medicine has experienced over the last two decades, particularly the epistemic change of medicine becoming biomedicine (Keating & Cambrosio, 2003). The neologism biomedicine refers to the reduction of medicine to a branch of biology in which the genomic sciences are the most important purveyors in this rearrangement (Cambrosio, Keating, Schlich, & Weisz, 2006). In this biomedical domain hardly exist any empirical studies of psychiatric diagnosis, and approaches which consider the procedure of diagnosis-making itself are scarce.

Considering this background, our objective was to examine how a psychiatric diagnosis is produced, that means, which material elements are forming it, from the Actor Network Theory (ANT) perspective. The extent to which the subject of psychotropic drugs arose during the ethnography and fieldwork discussions, identifying them as the key actors in psychiatric routines, prompted us to specify our research and examine their importance. Thus, we focussed on the

psychotropic drugs's work in the diagnosis-making process. Other possible influential issues like diagnostic categories or the psychiatrist-patient relationship, are not considered in this analysis and might be subject matter of further research.

After discussing social science studies of diagnosis, we illustrate the conceptual theoretical tools used for analysis. Then interview data and focused ethnography (Knoblauch, 2005) conducted in a Barcelona hospital during 2012-2013 to analyze diagnosis-making are presented. Subsequently we discuss how a diagnosis results from the recommendations for psychotropic drugs, or through psychotropic drugs translation. In order to describe this process, the notion of boundary objects as established by Star & Griesemer (1989) is applied. We put forward that psychotropic drugs as boundary objects support the ambiguity and uncertainty of psychiatric practices in the process of diagnosis-making in its own materiality. Finally we discuss the influence of psychotropic drugs within the diagnosis-making process in biomedicine.

The social study of psychiatric diagnosis

Critical social literature has largely approached psychiatric diagnosis through the medicalization process of clinical medicine (Conrad, 1975, 1979, 1992, 2007; Conrad & Schneider, 1980; Scott, 2006; Szasz, 2007). In this context, the social sciences have focused on the importance of the diagnosis, subsuming it within the broader process of social control termed medicalization. Medicalization and diagnosis are indeed closely connected; however the concepts belong to different explanatory domains. One of the means through which medicalization functions is the labeling of deviant social behaviour with a diagnosis (Zola, 1972). However, medicalization forms a wider framework for medicine to operate within, accentuates its values and underlines its

authoritative role (Jutel, 2009). Diagnoses are the classification tools of medicine, forming one of the main entities through which the power of medicine operates (Jutel, 2009). An important body of literature in relation to diagnosis has been developed in the field of medical sociology. Many studies in this arena have highlighted the consequences and inflictions that diagnosis produce to people's lives (Jutel, 2008; Horwitz, 2011). The implications of an absence of diagnosis in situations where a disorder has been alleged to exist have also been examined such as the well-known account of Post-Traumatic Stress Disorder for incorporation into DSM III¹ (Scott, 1990). When disease applications have not successfully gained recognition, the possibility of assigning political responsibility is denied (Trundle, 2011). Furthermore, it is claimed that diagnoses provide relief for chronic illness sufferers by validating their physical suffering (Lillrank, 2003), and promote the process of collective identity through the political potential of challenging professional authority and assigned identity (Brown & Zavetovsky 2004). Finally, diagnosis may confer recognition on patients, removing them from the isolation of their suffering and providing them with further support (Chong, 2001, quoted in Jutel 2009). However, other studies have addressed the ambivalence in a diagnostic label, by reporting the narratives of children diagnosed with ADHD² (Singh, 2011). This collection of works concerning the effects of diagnosis illustrates how the diagnosis itself can claim or blame, legitimize or stigmatize, facilitate access to resources or restrain opportunities (Jutel & Nettle-ton, 2011). It is also worth highlighting works from the anti-psychiatry standpoint, which contend that psychiatric diagnosis constitutes the imposition of value judgements derived from a custodial ideology established to defend society rather than care for the ill (Cooper, 1974; Basaglia, 1972; Basaglia, & Carrino, 1975). At the same

time, psychiatric diagnoses have been understood as the articulation of changes in the concept of normal and pathological in different societies over time. The archeology of psychiatric power which Foucault (2003) carried out, emphasizes how psychiatric diagnosis as a discursive practice derives from the dispositif of power. Moreover, the social construction of diagnosis has been illustrated in studies which underline how a particular condition is firstly described in medical terms and then incorporated into the category of disease (Goode, 1969; Conrad & Schneider 1980; Brown, 1995). This notion of the social construction of diagnosis has recently been discussed with reference to the work of Mol, postulating the fragility of diagnosis and diseases that become enacted in different medical assemblages (Mol, 2002; Gardner, Dew, Stubbe, Dowell, & Macdonald, 2011). Finally Jackie Orr (2010) reports about informatic management of psychiatric diagnosis as a key element of governmentality and contemporary psychiatry.

Theoretical background: Translation and Boundary Objects

The notion of translation developed by the ANT is used in the analysis in order to account for the diagnosis-making process. According to Latour (2001), translation means displacement, derivation, invention, and can be understood as one of the meanings of the mediation: the translation of goals. Translation means the process by which some actors are awarded and/or given the power to act on behalf of others (Latour, 1998). To translate is "to express in one's own language what others say and want, why they act in the way they do and how they associate with each other: it is to establish oneself as a spokesman" (Callon, 1986, pp. 18-19). More precisely, in this analysis translation refers to the work of psychotropic drugs as producers of diagnostic entities.

Discussing this concept, particularly the idea of obligatory passage point being enacted by translation process, Star & Griesemer created boundary objects notion. Boundary objects are abstract or concrete, flexible enough to adapt to local needs and robust enough to maintain a common identity across worlds, taking part in collecting, managing and coordinating distributed knowledge (Star & Griesemer 1989; Trompette & Vinck, 2009). The notion is used to describe how actors coordinate and negotiate the different meanings of the objects while maintaining their autonomy and communication (Star & Griesemer, 1989). Boundary objects allow different groups to collaborate without consensus (Star, 2010). The boundary objects theory gives an account of how a dispositif articulates the distributed and heterogeneous perspective of work and collective action.

Nevertheless the boundary objects collective model differs in two aspects from the translation analytical model of ANT (Fujimura, 1992). Firstly, the boundary objects notion allows translation to take place without the preeminence of one actor. Secondly, both analytical dispositifs are interested in the mechanism of associations, but only the boundary objects notion focuses on the way associations support the tension between cooperation and heterogeneity (Fujimura, 1992).

This theoretical perspective should be able to provoke a necessary radical comprehension of the facts to generate political projects and create novel explanations to relieve the suffering of users of mental services. Like Foucault (2003) asserts, psychiatry from the beginning dealt more with the segregation of the subjects than with the creation of truth about madness.

Data and methods



The research presented in this paper is based on a case study conducted between July 2012 and July 2013. A series of qualitative non-standardized indepth interviews and a focused ethnography (Knoblauch, 2005) were carried out in three phases: a) first round of four interviews, b) focused ethnography in a Short Stay Unit of Psychiatry, c) second round of five interviews. Nine members of the psychiatry service at a University Hospital in Barcelona were interviewed face-to-face, among them seven psychiatrists, a psychologist and a biologist. The interviewees worked in the three service areas the hospital runs for the care of psychiatric disorders: Outpatient Care Programs, the Laboratory for Genetic Analysis, and the Short Stay Unit of Psychiatry. Four of the psychiatrists were men, among them three chairmen of the Programs, while three were women, one the chairwoman of the Short Stay Unit. The biologist, a woman, worked in the Genetic Analysis Laboratory doing biological research in connection with a psychiatric program. The psychologist, also a woman, worked in a psychiatric program. Each interview followed a script posing open-ended questions, lasted between 40 and 60 minutes, took place in the hospital area and was recorded and transcribed. The subjects broached were as follows: how they grounded their decisions; the kind of technologies (tools, medical exams, procedures, protocols) used in clinical routines in order to support their judgements; how important neuroimaging studies were in the diagnostic process; whether the use of technologies enabled exchanges with other clinicians and how this was carried out; their opinions about the increasing rate of diagnoses and the medicalisation of everyday life. While the first round of interviews was more open examining the diagnosis-making in general, we narrowed the focus in the second round of interviews, as a result of the previously collected ethnographic data. Thus we concentrated on the role, uses and significances of psychotropic



drugs in psychiatric practices. The Short Stay Unit, where the focused ethnography was carried out in October/ November 2012, is intended to receive those patients from the Emergency Unit who give indications of disorder or psychiatric disturbance in the clinical encounters. A psychiatry team provides short-term care and examination, in order to quickly recover the basal behavior and stabilize the patient, either for discharge or transfer to a psychiatric center for long-term care. Further data were obtained from daily informal exchanges with two psychiatrists at the Unit, accompanying them at patient interviews and observing their daily activities, which consisted of conversations with the nurse team, calls and interviews with patient's families, discussions and coordination with other health professionals and social workers, permanently registering their activities by computer and consulting data in the patients records. A content and qualitative analysis (Ruiz Olabuenaga, 2003) of the textual material of interviews was conducted. The theoretical perspective has been the core of the analysis, being itself theoretical-interpretive. The selected data were inferred from a recursive process between the narratives of interviews and the research question, their significance interpreted with the context and theoretical background taken into account. The ethnographic field-notes were analyzed following the thick description method (Geertz, 1987), focusing on the statements made by psychiatrists related to diagnosis and on the diagnosis-making process itself.

Analysis: Psychiatric diagnosis and psychotropic drugs: the management of uncertainty

This is an excerpt from a field-note transcribing an interview between a psychiatrist and a patient's son. Extract N° 1:
Ernesto's son: What is it, is it dementia? Psychiatrist: Cognitive impairment as a



result of the vascular accident, had a stroke in 2005. Ernesto's son: But what is the diagnosis, what does my father have? Psychiatrist: At the age of 50 it is difficult, as it may be an outbreak, there are different types of schizophrenia (Field-note 22 October 2012, author's translation).

After the interview we talk about Ernesto in the medical room. The psychiatrist and the neurologist discuss whether the OCD³ has compulsive hoarding behavior or if it is due to cognitive impairment. They value that yes, that no, that it might be in this case, then they suddenly change to another topic. They look at the patient's EEG⁴, and interpret it properly (Field-note, further discussion in medical ward between psychiatrist and neurologist 22 October 2012, author's translation).

These fragments underscore the uncertainty that frequently characterizes the clinical psychiatric judgement. The high degree of indeterminacy of clinical situations makes it possible and feasible to diagnose a cognitive impairment, OCD or schizophrenia to an individual at the same moment of his biography. In this case the diagnosis is made following the DSM's mainstream literature, so that it is possible to overlap diagnoses, because they are defined by an addition of symptoms. However, this situation is not perceived as problematic. On the contrary, as part of the normal routines, the psychiatrists deal with the ambiguity. In the current biomedical context and perhaps due to the lower degree of development and stabilization of scientific knowledge within psychiatry (Rabeharisoa & Bourret, 2009), a surprising situation has been observed in the following conversation in a medical ward, Extract N° 2:

When the son went away I ask the psychiatrist what she believes about Ernesto, I tell her his son mentioned a previous diagnosis, and if he suffered from a

psychiatric disease before, the stroke would alter the picture. Her reply to me was the same as to the son: that it is not likely for schizophrenia to appear at the age of 49/50, but it also may just be an outbreak. These data do not seem to be relevant for a medical decision. What really matters is the selected medication, quetiapine, and how the patient is responding to it. (Field-note 22 October 2012, author's translation).

This case shows that there exist situations where psychopharmacological use occurs prior to diagnostic assessment in psychiatric clinical routines. As a way to organize medical activities in order to manage the problems the illness poses, psychotropic drugs are administered before a diagnosis is made. Thus, the classical formula "judgement - diagnosis - treatment", characteristic of clinical medicine, is not observed in the analyzed context. On the contrary, the diagnosis seems to be made after psychotropic drugs recommendations and usage, being the product of the patient's response to prescribed psychotropic drugs. As we can notice in the following extract taken from a conversation with a psychiatrist in the medical ward at the Short Stay Unit, Extract N° 3:

[...] the ideal initial action is to deliver medication to a patient and examine him/her later. If someone does not cooperate, is restless, cannot be controlled, you deliver medication not to sedate but to calm him down, ease the anxiety and dysphoria and examine him/her later (conversation with psychiatrist Irina, Field-note, 13 November 2012, author's translation).

As we can see, the patient's evaluation starts with an observation of an individual who has been administered psychotropic substances previously. This medical action aims to recover the health of the patient and functions in practices like the first support in order to make a diagnosis. Indeed the psychiatric evaluation deals from the beginning with an amount of data where

the clinical signs are intertwined with the significances produced by clinical collectives⁵ embodied in the psychopharmacological drugs. For this reason, the questions concerning psychopharmacology require an important place in the interviews, Extract N° 4:

The psychiatrist interviews María in her patient room:

P: How do you feel?

M: A little bit anxious.

P: How did you sleep?

M: I would have needed a pill more for the anxiety, but finally it's gone.

P: What about your mood...?

M: I think it's better, but I feel like a pudding.

P: How does the medication work?

M: Better...

P: It took much time to decide the correct medication in order to get you to sleep, and control your anxiety.

The exploration of the body effects after administering psychotropic drugs is an important piece of thread to obtain knowledge about the patient's condition. This examination focused on psychotropic drugs provides crucial information, and the patient, the "linguistic voice" (Leder, 2016), expresses the effects of the body. But why do the psychiatrists prioritize the data coming from the body effects translated by the patient's narrative?

At first, because there exists neither a body to be examined nor diagnostic technologies to be applied. This distinctive characteristic of psychiatric diagnosis creates the special positioning for the psychotropic drugs. They become the only reliable resource of data, apart from clinical hermeneutic, in order to ground or to support the clinical judgement. For this reason, the



psychotropic substances are available in order to be used before, during and after the diagnosis-making process, being an important support to get information about the state of a patient's mental health.

Second, it is as a matter of fact, due to historical reasons that the psychotropic drugs exist prior to diagnostic clinical evaluation in the clinical settings. They are acting earlier in the clinical scene, offered for use in different forms, as pills, drops, capsules, solutions. Their possibilities to act have been established in clinical guidelines and manuals, like scientific knowledge embedded in a discrete substance to work in distant spaces and different bodies. Thus, psychotropic drugs are previous due to the scientific procedure, and their indications are associated with specific usages and diagnostic categories. Indeed, there exists a connection between psychotropic drugs and the knowledge infrastructure delegated into the substance, which has previously been associated with a diagnostic entity. This connection is legitimated within the framework of the chemical imbalance hypothesis (Healy, 1997, 2002). The new psychiatry produced by the so-called "pharmacological revolution" is based on the hypothesis that psychotropic drugs have specific effects on behaviour or state of mind, modeling mental disorders as an expression of a biological brain dysfunction (Healey, 1997; Orr, 2010). According to this scientific model, the significances produced by clinical collectives are transformed in actions and decisions in clinical settings. Thus, the psychiatric substances as semiotic-material tools, offer the materiality and significances to make diagnosis. In this sense psychiatric judgement is not only unfolded through the psychiatrist's skills and expertise, but seems to mobilize the scientific evidence embodied in the psychopharmacological substances.

As the following extract illustrates, Extract N° 5:



We interview a new patient (Francisco) who admitted himself to the emergency hospital before he could commit a violent act against other people. He consumed alcohol for a long time and therefore had family troubles. He has been administered benzodiazepines for the withdrawal syndrome, antidepressant and hypnotic and a series of medicines for other medical problems (Field-note, 12 November 2012). The day after we come back to visit Fernando. After the interview we talk in a medical ward. Asking the psychiatrist for Fernando's diagnosis, I recognize that the answer depends on the patient's response to the therapeutic drug treatment: if he responds better to the reduction of benzodiazepines than to antidepressants, the answer tends to a SRAD⁶ rather than a DD⁷ or vice versa (Field-note, 13 November 2012, author's translation).

The clinical observation is meaningless in this situation. The important issue is which administered psychotropic drugs related to a specific mental disease are more effective and produce a quicker recovery. There is an inversion in the diagnostic process, whereby the therapeutic substance acts to attribute meanings and validate diagnosis-making. Thus, diagnosis as part of articulation work to manage medical practices (Strauss, 1985) is enacted as a result of the psychotropic substances translation. According to the concept of translation posed by Callon (1986), psychoactive drugs seem to propose the way to organize diagnosis. However, while translation as introduced by Callon is a unidirectional process, within psychiatric diagnosis-making a recursive translation or feedback process occurs. Finally the clinical hermeneutic plays a role determining whether the diagnosis will be a SRAD or DD. In other words, the realization of diagnosis involves a process of meanings attribution where psychotropic drugs perform the conditions for a clinical objectivity. However clinical expertise subsequently constitutes the obligatory passage point that

translates the materiality and meanings of psychotropic drugs to carry out diagnosis.

Discussion: Psychotropic drugs as boundary objects

In order to account for this process, the analytical category of "boundary objects" is applied to explain the articulation of practices and knowledge supported by psychotropic drugs. As has been described, psychotropic drugs are able to manage and solve uncertain situations posed by the clinic, working as biotechnological significance-dispositifs for the processing of diagnostic uncertainty. In this sense we establish that psychotropic drugs as boundary objects, provide the semiotic-material (Haraway, 1999) assemblage of diagnosis. The expression semiotic-material assemblage refers to a kind of material structure charged with significance, from which psychiatric diagnosis is enacted. We use the term assemblage in the sense of infrastructure, as artifact, and as the material base of psychotropic drugs in the diagnosis-making process. As Trompette and Vinck (2009) have noted, the original conceptualization of boundary objects makes reference to two analytical dimensions: interpretive flexibility and the incorporation of an invisible infrastructure. Interpretive flexibility refers to certain properties of boundary objects, such as "support of heterogeneous translations, as dispositif of integration of knowledge, as mediation in the process of coordination between experts and non-experts" (Trompette & Vinck, 2009). In the current analysis, the interpretive flexibility of psychotropic drugs supports or rather administers the ambiguity and uncertainty of psychiatric practices in the process of diagnosis-making in its own materiality. Crucial is the way in which psychotropic drugs as boundary objects encapsulate and manage a multiplicity of entities where the contradictions, ambiguities and uncertainties (for example among the diagnostic



categories) are no obstacle to the action. The actions of psychotropic drugs, with their expected and promised effects, bring continuity to clinical practices. They displace difficulties in the evolution of action, thus dissolving barriers established by the clinical activities. It is the action of psychotropic drugs, as well as the certainties and promises of their effects, which allows diagnoses with different epistemological trajectories, such as OCD, schizophrenia and cognitive impairment, to be managed as equivalent entities in the same plane. Psychotropic drugs give continuity to the work of psychiatrists, as they face the expected and unexpected contingencies in the illness trajectory. Thus, psychotropic drugs act as boundary objects, the interpretive flexibility which assemble the actors, making collective work and the negotiation of meanings possible in the psychiatric practices analyzed.

In addition, the second analytical dimension - the invisible infrastructure - is the property that explains the processes of delegation and refers to the transport of categories, classifications and norms that occurs in the interaction. This dimension highlights the practices of scientific work that are often blurred, lost or hidden behind the clean and clear presentation of the outcomes translated into stabilized scientific knowledge. According to Star and Ruhleder (1996), the invisible infrastructure is the result of collective work, it is therefore a relational concept arising from practices. Considering psychotropic drugs as boundary objects, makes it possible to grasp how groups produce and manage information, incorporating the materiality, as the central mediation in knowledge management (Trompette & Vinck, 2009). More fundamentally, it enables us to visualize how psychiatric drugs as boundary objects support an invisible infrastructure of knowledge that materializes and mobilizes the

scientific assemblage of biopsychiatric truth regimes, articulated for diagnosis-making by the psychotropic drugs themselves.

Conclusion

Researchers have emphasized the changes occurring in clinical practices within biomedicine, resulting from the continuous production of biomedical entities, and how, in this process, diagnostic clinical judgement is being transformed. These studies agree that the reconfiguration of clinical judgement in biomedicine has involved a shift in locus from clinical to bioclinical collectives (Bourret, 2005), maintaining slight differences in descriptions of this process. The majority of these works have been carried out in the field of oncology, where research is highly active (Rabeharisoa & Bourret, 2009). In the field of psychiatry, however, less attention has been paid to this development. Therefore, we would like to enrich the debate by making visible the peculiarities of diagnostic psychiatric judgement within these biomedical transformations. In this domain, we claim that diagnostic judgements not only originate from the skills and expertise of psychiatrists, but are also produced by the mobilization of scientific evidence embedded in psychopharmacological substances. This assertion challenges the hegemonically established mainstream truth (Ibanez, 1993).

This study also emphasizes how the use of psychotropic drugs connects the field of practices to the new bioclinical collectives. Psychotropic drugs as technological significance-dispositif, mediate the field of clinical practices with collective spaces of production and regulation of biomedical entities. As part of this operation, psychotropic substances translate the psychiatric clinical judgement in order to carry out diagnosis, but the clinical judgement subsequently translates the materiality and significance presented by

psychotropic drugs. As a result, psychiatric clinical judgement arises from the semiotic-material assemblage of psychopharmacological substances.

Therefore, clinical hermeneutics is also a decoding process, where the attributed meanings have previously been performed by psychotropic drugs. The analytical dimension of boundary objects is an artifact to comprehend this operation. In this work, psychotropic drugs as boundary objects describe a trajectory that connects and articulates bioclinical collectives with bodies of patients, psychiatrists, diagnostic categories and all sorts of materializations of scientific evidence. In this movement, diagnostic assignments are merely a transitional stabilization of psychotropic drugs in the illness trajectory. In biopsychiatry, psychotropic drugs as boundary objects act as central mediators in knowledge management, establishing the semiotic-material assemblage of diagnosis.

Footer

¹Diagnostic Statistical Manual of Mental Disorders III edition.

²Attention Deficit Hyperactive Disorder.

³Obsessive-compulsive disorder.

⁴Electroencephalogram.

⁵They are formed by the laboratories, groups of researchers and doctors who develop guidelines, clinical consortia composed by biologists, statisticians, and experts in the life sciences.

⁶Substance-Related and Addictive Disorder.

⁷Depressive Disorder.

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