

Beyond the Bio-Reductionist Symbolic Code: Experiences of Multimodal Education in Italy

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Medical education is mostly based on a reflexive bio-reductionist paradigm, characterized by a technical language that is abstracted from the social materiality of the body and the disease. This linguistic code learnt during lectures is reproduced during the apprenticeships, in which a deceptive restoration of iconic and indexical links with the patient is integrated and exploited by the main symbolic modality of education. In this case, the implementation of multiple semiotic modes of meanings, such as visual and/or gestural, consolidates a rituality aimed to the embodiment of the medical role by the students (hidden curriculum) and to a further objectification of the patient. In Italy, groups of medical students and young doctors have been trying to experiment alternative multimodal practices of education and implementation of their competence. The aim of these experiences is to shift the focus from the pathology as a mere object of medical abstracted knowledge (and power) to the patient's incorporated experience of illness and to the entire social and material process that determines health and disease. In these cases, multimodality is conceived as a strategy to restore a fair exchange of knowledge and practices with the patient, recognized as an active social subject in the whole care process. Through the comparison of these two medical educational approaches, the aim of this study is to demonstrate that an alternative medical education method should overcome the bio-reductionism paradigm. To this purpose, we will identify multimodality and its effectiveness not merely in the implementation of different tools (other than the linguistic ones) in educational practices, but in the adoption of multiple modes of sign relation beyond the hegemonic symbolical one.

KEYWORDS

health vs. disease, medical education, multimodalities,
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1. The bio-reductionist paradigm

The educational path of medical doctors is mostly based on a theoretical and technical knowledge. The body, as the key *object* of study, is codified in a semiotic structure of elements and relations. On the discursive level, this matrix is characterized by bio-reductionist concepts and registers, of which *evidence* restores a deceptive empirical link with the materiality of the body and contributes to building the myth of medical objectivity¹. This myth mystifies its linguistic abstraction behind the empirical evidence of biology. According to Davis-Floyd (1994: 23), “to technocratize a natural process is to create it in the image we have chosen as the guiding metaphor”. The mechanism reveals its own ambiguity: the naturalized body is under the control of the subject since it is designed as a meaningful object through a linguistic structure which mediates between subject and object itself by separating the two terms of this relation of knowledge. In other words, knowledge and control of the subject on the body-object is always a consequence of a linguistic abstraction of the object itself as a discrete element and autonomous system. This is what Davis-Floyd defines as “the principle of separation” of the technocratic approach, according to which “things are better understood outside of their context, that is, divorced from related objects or persons. Technomedicine continually separates the individual into component parts” (Davis-Floyd 2001: 6). Therefore, the *objective* status of health is determined by the coherence of these components within such a linguistic and bio-reductionist *model* of body. As in language, therapy is aimed to technically re-establish the correct syntax amongst the elements of the model.

According to Charles Sanders Peirce’s semiotic perspective (Peirce 1905), we could define these series of linguistic notions and concepts as symbolic signs. The relation of symbols to their meaning/referent is always mediated by a third plane, a sort of conventional code, to the liminal point in which symbols lost the link to the referent and signify exclusively themselves. Despite their referential power, natural languages are emblematic structures of arbitrary symbols. This is the reason why we have defined the bio-reductionist paradigm as a modality of linguistic objectification: like a natural language, bioreductionism exploits the evident reference to the objective world in order to conceal its own naturalized and self-referential conventionality. Nevertheless, more properly, we should interpret bio-reductionism as a symbolical code, rather than a linguistic one. Indeed, the bio-reductionist approach that characterizes medical education is not only an issue of linguistic notions learnt during lessons or studied on books, but a broader conventional discourse that is reproduced at every step of the medical doctor’s formative path and professional experience. Learning and developing this code is the main achievement in the medical education path.

In Italy, this educational paradigm is designed since the first years of university, in which students are asked to learn a series of theoretical notions through which a bio-reductionist model of body is constructed. Lessons consist in moments of vertical transmission of a se-

ries of data that the student is required to memorize. Some clinical cases are rarely introduced; these would be useful to the student to investigate the object through an inverse approach: knowing the pathology starting from the way in which it manifests itself in real life. Nevertheless, even this approach results in a simulation of reality through a standardized model: the cases debated in classroom are usually typical examples, in which the symptoms manifest themselves in a predictable way and the diagnosis proceeds without any irregularity. In other words, these cases are predisposed to automatically reflect a given theory, which is never developed inductively from the observation of a real pathologic phenomenon.

What is denied in the university classrooms is a direct contact with the materiality of the body – a contiguity negated in two different but interrelated ways. First of all, a set of abstracted terms acquired from lectures consists in a mere semiotic representation of the body through its absence. Secondly, the materiality of body is conceived just in bio-logical terms, purged from its social and cultural determinants. The category health vs. *disease* is determined by the linguistic and biological reductionism which affects the notions of life and body in the medical scientific epistemology. The predominance of biomedical disciplines in the educational curriculum prevents to acknowledge the broader social and cultural context in which people and their bodies develop *sickness*, and it also limits the recognition and the confrontation with the patient's subjective perception and experience of his/her own *illness*. The use of the terms in italics reflects three different aspects and perspectives on a broader condition of lack of health (Twaddle 1993):

- *disease* is used to describe a biological alteration in the functioning of the organs and/or of the physiological system;
- *illness* indicates the subjective perception, experience, attitude and expectations of the patient about his/her (lack of) health condition;
- *sickness* refers to the social aspects of disease, in particular the way in which a social group acknowledges, interprets and implements strategies in relation to a “socialized disease”.

The disease-centered perspective, hegemonic in contemporary medical education and practice, has its origin in the contribute of Thomas Sydenham:

Nature, in the production of disease, is uniform and consistent, so much so, that for the same disease in different persons the symptoms are for the most part the same; and the self-same phenomena that you would observe in the sickness of a Socrates you would observe in the sickness of a simpleton. (Sydenham 1848, 15)

To this regard, Maccacaro (1979: 414) highlights the mythical and ideological mechanisms that instrumentally exploit and absolutize scientific data to conceal the structural causes of disease². In particular, Maccacaro provides the example of two medical myths that, by a curi-

ous coincidence, have their origins in the same year. In 1865, Mendel started his experiments on genetics while Pasteur theorized the microbial genesis of infectious diseases. Almost a century later, the contemporary medicine will have transformed these two fundamental scientific achievements (the gene and the germ) in ideological myths: every disease has a genetic and/or microbial origin. To this purpose, it is emblematic the emphasis dedicated by the generalist press to discoveries such as the gene related to Alzheimer³ and/or the virus that causes the lung cancer⁴, while studies on the social determinants and factors of disease do not receive the same attention.

A bio-reductionist model mystifies the structural social determinants of disease. This way, tuberculosis is not a consequence of malnutrition and of the insalubrity of an overcrowded habitat, but simply of the mycobacterium Koch [...] For these reasons, the student perspective is not focused along the etiologic chain starting from the sick person to the causes of the causes of his/her conditions within the social system (Stefanini 2014, our tr.)

In more recent years, the same emphasis reserved to genetics and microbiology is attributed to lifestyles: nutrition, physical activity, smoking and alcohol consumption are considered the principal and individual causes of several diseases. Nevertheless, as widely documented by epidemiological studies, unhealthy lifestyles and behaviors are not casually distributed along the population, but they are more widespread in the deprived social classes and brackets. In the Italian case, people from regions with a higher rate of poverty and unemployment are more subjected to obesity, smoking, alcohol consumption and sedentary habits (ISS 2017). In the light of these studies, although it is not our purpose to embrace a strict social determinism, it is necessary to state how lifestyle is not a (individual) choice.

The lack of confrontation with elements outside the bio-reductionist paradigm does not allow the medical students to develop a critical perspective on their own field of study and work. Promptly inserted in the mechanism of self-reproduction of the bio-reductionist language, students have not provided with a semiotic gap of interpretation of symptoms and of broader conditions of health and disease. Their knowledge of the object of study is reduced to the automatic solution of a code, aimed to discover a self-evident *formula* of life and body, rather than investigate their social *form*⁵. Consequently, their practice on body consists in a series of technical operations, aimed to activate that formula and metonymically the whole bio-reductionist paradigm:

University works to 'manufacture consenting workers', by providing information and notions detached from the context [...] these notions are useless and serves to damage the critical sense and to educate the future medical doctor to passively accept the technical data provided by professors (Stefanini 2014, our tr.)

2. The Medical Doctor-Patient relationship

The symbolic abstraction of life, body and disease is operated even when medical students and professionals are in contact with *material* bodies and, more generally, *real* people. Maccacaro (1979: 413) highlights that medical doctors often provide their diagnosis through a translation of the patients' symptoms in medical terms. The tautological codification and linguistic privatization of the same empirical element are used to affirm the differential of power between medical élites and patients⁶. The symptom is rarely interpreted as *index* of its own cause (etiologic diagnosis), but it is immediately objectified in the medical linguistic structure, and separated from the patient, as a conventional *symbol* (descriptive diagnosis). In particular, the symptom is purged from the experience lived (and narrated) by the patient and directly acknowledged as a discrete signifier of a disease in the medical code. Along with the symptom, patients themselves are objectified as medical cases of study and intervention, under the knowledge and the agency of the doctor – (self)designed as a professional figure.

Jordan (1993 [1978]) demonstrates how this tendency to objectify patients can extend to the refusal to discuss any details of a case with the person who embodies it. Moja and Vegni (2000: 92) report the average time dedicated to anamnesis: only 18 seconds at disposal of the patient to describe his/her symptoms before being interrupted by the medical doctor. After this short period of time, the medical doctor starts to abstract and re-codify the patient's narration in a bio-reductionist symbolical structure. The medical doctor usually tries to individuate the spatial-temporal coordinates of the symptom by asking the patient to precisely collocate his/her perception of the illness through categories such as /below vs. above/, /up vs. down/, /parietal vs. visceral/, /before vs. after/, /chronic vs. acute/. These linguistic categories and coordinates serve to construct a signifier-signified equivalence that does not leave room to external factors and critical interpretation. To this regard, the two authors identify in the ease of transmission of this code, in particular in the possibility to be taught and learnt, its most important factor of success.

Indeed, the critical elements in the relationship between medical doctors and patients, emerged from the previous examples, are a consequence of how medical students, during their educational path, are both formally taught and informally induced to create a gap from patients, merely objectified and identified with their own disease. Behind the *explicit* linguistic code of objectification acquired during traditional lessons and learning activity, an *implicit* (both as hidden and implicated) educational curriculum is absorbed by students during their practical drills and apprenticeships. The implicit curriculum consists in a series of practices and undeclared rules that constitute a hidden but effective code. This code is directed and performed by professional medical doctors in order to establish patterns of hierarchical relationships amongst the subjects involved in the medical environment, in particular between medical doctors and patients. In this dialectics, students and interns are trained to learn (through),

imitate and progressively assume the attitudes and the behaviors of their superiors in the relationship with the patient.

Bert (1974) states that the main purpose of *shadow-didactics* - more often known as *hidden curriculum* - consists in the reproduction of medical doctors' hegemonic and institutionalized role. In other words, the hidden curriculum does not provide the future medical doctor technical competences in the treatment of the patient, but rather a set of symbolical rules to reaffirm his/her power as a subject through the annihilation of the objectified patient. Again, objectifying knowledge represents a *dispositif* of self-reproduction and separation rather than a mean of connection. Therefore, despite its more practical focus, centered on a direct contact with the patient, the hidden curriculum acquired during the apprenticeship is not opposite to the explicit one; rather it *implies* and materializes the same hegemonic symbolic and abstract modality of medical education. As reported by Davis-Floyd:

Mechanizing the human body and defining the body-machine as the proper object of medical treatment frees technomedical practitioners from any sense of responsibility for the patient's mind or spirit. Thus, practitioners often see no need to engage with the individual who inhabits that body-machine. [...] This kind of alienation from their patients is often trained into physicians during medical school and residency, as they are taught to protect themselves by avoiding emotional involvement. It logically follows that there is no reason to deal with the patient's emotions at all (Davis-Floyd 2001: 6).

The apprenticeship activity is accurately described in the book *Medici senza camice. Pazienti senza pigiama*⁷ (Abbracciavento et al. 2013): this important source consists in a study conducted through the method of narrative socio-analysis (Curcio et al. 2012) by a group of medical students and young doctors aimed to explore medical institution in Italy through a focus on education. The book criticizes the process of obliteration of the patient. This is the case of the rounds, one of the most emblematic moments during the apprenticeship, widely narrated in the book. Rounds consist in a sort of ceremonial in which the deceptive focus on the patient is instrumental to the performance and the reproduction of the medical hierarchical roles. An 89-year woman, suffering and crying, exhibited to students and interns by the doctor as a "wonderful case of rheumatoid arthritis" (ibid.:24, our tr.). The woman is exposed and spectacularized, reduced to an empty *image* of herself. The medical gaze violates the intimacy of the patient, reduced to an objectified surface. In fact, her actual presence is irrelevant, her voice and pain ignored, and "nobody seems to realize that she is listening [...] she is there" (ivi, our tr.). The following patient is subjected to the same ceremonial. Her body is covered by deep bedsores, opened to make the femur visible. Her intimacy is violated and exposed not only by the disease, but also by an intern who repeatedly invites the students to "look at" those sores. The physical spectacularization and personal violation is further marked by students promptly to photograph the scene with their smartphones and tablets (ibid.:25,

our tr.). A third example is even more emblematic: a man subjected to a cystoscopy test, with a probe inserted in his penis and linked to a non-working monitor. Thus, students and interns inspect and put their hands to re-establish a connection between the patient's body and the machinery, waiting for a further exposition and bio-reductionist superficialization of his intimacy on the monitor (ivi. our tr.)

At the Harvard Medical School, an internist used the term *fascinoma* to define a complex clinical case that needed to be thoroughly showed to and observed by students for its emblematic scientific value (Good 1994). The neologism mocks the nomenclature of tumorous pathologies to mark the fascinating aspect of these complex cases. The overexposure of these diseases undermines their indexical link with the patients to increase their symbolic value in relation to the medical code and gaze. Paradoxically, such exposure reaches its highest level when there is no patient to show. In another example provided by *Medici senza camice*, a medical doctor says that during the rounds the entire ceremonials go on, even if the patient is temporarily absent.

The presence of the patient is irrelevant, since his/her status of health is already totally codified in the symbolic data inserted in the medical chart. The spectacle of the disease is functional to the spectacle of the rounds, which consists in the performance of reproduction of the medical role(s) with no other spectator than the medical figures themselves. Indeed, rounds are the moment of maximum visibility of the students and interns. The recognition of the students by the doctor depends on his/her capability to reduce the patient in "bullet points" during the reading of the medical chart (Abbracciavento et al. 2013: 28). During rounds, the anamnesis is a moment to test the ability of the students to direct and skim the narration of the patient in favor of medical technical data. A student talks about her experience of anxiety during the anamnesis of a patient, "How to write this, how to traduce it and, above all, is what she is saying pertinent?" (ivi, our tr.)

The anamnesis is one of the steps during rounds aimed to move the focus from the multimodal relationship of knowledge between patient and student to the symbolic reflection of roles and power between students and medical doctor. "What is important during anamnesis is to bring everything to the intelligibility amongst colleagues. If the patient read *his/her own* medical chart he/she would not understand anything" (ivi, our tr.). The first two years of the apprenticeship serves to learn to write, to reduce the ill person to patient and documents: as a student affirms, "the authority comes from writing" (ibid.: 29, our tr.).

In reading the clinical notes of a patient suffering from chronic bronchitis, a student wonders whether: "the patient is really having the symptoms reported in that technical terminology or he has to have those symptoms just because he has the chronicle bronchitis?" (ibid.: 30). After reading a series of medical charts, the same student states to perceive a sort of "acritical and automatic repetition of some technical terms, besides the patient's *real* conditions [...] an automatic translation from the diagnosis to the description of the symptoms [...] a pure exer-

cise of style” (ibid: 30 - 31, our tr.). The direct link with the patient is always sacrificed in favor of a symbolic linguistic codification, of which intelligibility is circumscribed to the medical figures.

How can we answer the people’s questions if they are not able to communicate our language? [...] They teach us to be pleased with our own magnificence, with our incomprehensible words and consequently with our impenetrability. I knew I was learning a language belonged to an elite [...] that would have separated me from the other people. (ibid.: 32)

This conventional language is acquired during the first years of university and further reproduced during the apprenticeship⁸. Although during their apprenticeship students and interns are apparently provided with a different didactic material, the iconic and indexical link with the patients’ body are not nearly alternative to the main symbolical and abstract modality of education. Such multimodality is determined and characterized by the hegemony of the bio-reductionist linguistic pattern. The visual and physical contact with the patient does not constitute icons or indexes, but it works as a symbolic mode of signification: it signifies (in) the absence of the referent (the patient), reduced to an automatic meaning (disease) of that symbol (symptoms). Therefore, the overexposure of the body and the physical contiguity with the patient are the elements that *play hide-and-seek* in the mythical chain⁹. The iconic and indexical links with the patient are taken to the extreme to affirm the scientific validity of the medical discourse and, at the same time, negated to not interfere with the autonomy and self-referentiality of that discourse.

Michel Foucault (1973) represents a key theoretical source in order to further investigate the modalities underlying contemporary medical discourse and education. Foucault identifies the birth of modern medicine with the development of the hospital *dispositif* at the end of the XVIII century. Before this passage, medicine observed disease and implement therapy in the contexts of its natural (and social) manifestation and development, since the hospital was a space exclusively aimed for the assistance of indigent people, in which the disease could have been altered and even worsen. Nevertheless, when medical societies began to finance the construction of new hospital structures, a new contract between medical doctors and patient was established: these spaces become clinics for medical observation and formation. The patient, as the subject who required assistance and therapy in a hospital conceived for him/her, becomes an object of observation to improve knowledge (control and power) of students and doctors in a clinic conceived for these medical figures:

But to look in order to know, to show in order to teach, is not this a tacit form of violence, all the more abusive for its silence, upon a sick body that demands to be comforted, not displayed? Can pain be a spectacle? [...] it is just that the illness of some should be transformed into the experience of others [...] And in accordance with a structure of reciprocity, there emerges for the rich man the utility of offering help to

the hospitalized poor [...] What is benevolence towards the poor is transformed into knowledge [...] these, then, were the terms of the contract by which rich and poor participated in the organization of clinical experience (Foucault 1973: 84 - 85)

What is pointed out by Foucault is that, *despite*, or better, *by*¹⁰ the spectacle offered by the patient's sick body, the focus of clinics and hospitals is moved on medical experts. The image and the direct contact with the patient are actually abstracted in a relationship of knowledge and power in which the medical figure represents the hegemonic term. Likewise, Davis-Floyd highlights how the institutionalization of the medical discourse and practice coincides with a further crystallization of the medical power:

Like its industrial predecessor, the technocracy is a hierarchically organized society. The term technocracy implies use of an ideology of technological progress as a source of political power. It thus expresses not only the technological but also the hierarchical, bureaucratic and autocratic dimensions of this culturally dominant reality model (Davis-Floyd 2001: S7).

Through a different perspective, the same point is developed by Baudrillard (1976); what is prevented in such a power relationship is a form of *symbolical exchange*¹¹ between patients and medical doctors. The reciprocity and gratitude of the exchange in a logic of endless reversibility is interrupted and mediated by the institutionalization and codification of the relationship through a contract, and the following accumulation of value by one of the two terms. The body and the image of the patient are generally subjected to a *positivization*, since their meaning is no longer symbolically exchanged with the reality of the ill person, they lost their *negative* depth and become mere symbolic signifiers on the surface of the medical linguistic code. The iconic and indexical signs, abstracted from the patient-referent and interpreted exclusively in function of the medical code, become medical means of obliteration of the patients themselves.

3. Alternative multimodal experiences

In this last section, we want to provide some examples of alternative experiments and experiences of medical education in Italy. As in the case of *Medici senza camice*, the alternative experiments are usually undertaken by group of Italian medical students and/or young doctors that try to critically analyze their academic and professional experience in order to propose new modalities of medical education and activity. The experience of *Medici senza camice*, focused on a meta-reflection on the educational *dispositif*, has inspired other groups and ac-

tivities directly centered on the experimentation of alternative educational practices, beyond the traditional clinical environment.

In the following cases, multimodality is not merely conceived as a plurality of educational devices and languages, but it is adopted to restore a direct link with the patient, conceived as an active subject in the symbolical exchange of knowledge and practices with the medical figure. What we propose through such examples is something different than a “humanistic” approach (Davis-Floyd 2001). A *humanization* of the medical relationship is not enough if conceived just in terms of a kinder, “compassionate” treatment of the patient, at superstructural/communicative level, leaving unaltered the technocratic/bio-reductionist basis of the approach. Focusing on the social determinants of health (fig. 1) and disease is not merely an issue of perspective on a stable object, but it is important to acknowledge how social material factors and relative discourse affect and transform the entity of health and disease themselves.

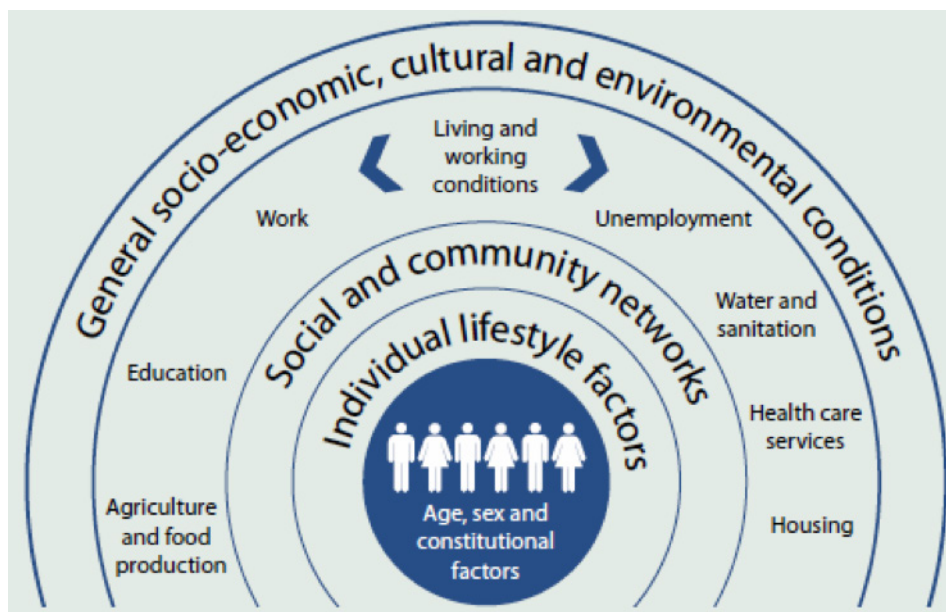


Figure 1. Social determinants (and strategies) of health. Source: Dahlgren & Whitehead 1991

Indeed it is necessary to recognize the way in which social discourse is embodied by social actors (Csordas 1990, 1994). For these reasons, a truly alternative medical paradigm has to conceive the patient not only as a human being (rather than an object), but as the fundamental social agent of his/her own health condition¹². To this purpose, the work by Ivan Illich (1976) has been a theoretical basis for many of the alternative experiences we propose in this article. Through the concept of “medical nemesis” (105), the author points out that technocratic medicine and clinical environments, by depriving the patient of any autonomous ability to cope with illness, become main factors of disease:

New devices, approaches, and organizational arrangements, which are conceived as remedies for clinical and social iatrogenesis, themselves tend to become pathogens contributing to the new epidemic. Technical and managerial measures taken on any level to avoid damaging the patient by his treatment tend to engender a self-reinforcing iatrogenic loop (Illich 1976: 11).

For these reasons, Illich states the necessity to limit the development of the technocratic model of medicine in order to promote health starting from its social factors and subjects:

Instead of multiplying the specialists who can grant any one of a variety of sick-roles to people made ill by their work and their life, the new legislation would guarantee the right of people to drop out and to organize for a less destructive way of life in which they have more control of their environment [...] Instead of submitting the physical and mental integrity of citizens to more and more wardens, such legislation would recognize each man's right to define his own health (ivi 105).

One of the requirements of these alternative experiments is the immersion into the context in which patients, or better, people, build and develop their daily life and relationships. The aim is to move the focus from the disease as a scientific object in the clinical environment, to the entire social and historical process that determines health and sickness as socio-cultural values. Reframing care work and education as activities with and within the community not also requires the epistemological and methodological recomposition of the medical academic knowledge fragmented in the different disciplines, but also the alliance with fields of knowledge focused on society, history, politics and language (Riccio et al. 2016: 225). Indeed, these experiments conceive the transformation of medical education and research as tool of social transformation, following the examples of the Participatory Action Research (Montero 2000; Barbier 2007; Genat 2009; Loewenson et al. 2014), and of Research/Education-Intervention (Ceccim and Feuerwerker 2004; Franco 2007; Curcio et al. 2012).

Nevertheless, such an operation of self-critique and of re-organization of the medical and, more broadly, academic knowledge risks to reproduce the same reflexive bias if the role of the researcher is not questioned. According to Basaglia and Basaglia Ongaro (1975: 3), the researcher, remaining prisoner of his/her own role, reproduces the division of labor and classes in the attempt to overcome the same divisions. In other words, an effective Participatory Action Research has to redefine the hierarchy of roles between researcher and object of research, as affirmed by the Theory of Dependence (Freire 1973, 2002). As demonstrated by numerous studies of medical anthropology (Farmer 2003, Krieger 2011, Quaranta 2012, Napier 2014) and by researches on public health (Who 2008, Marmot 2010), the practices aimed to improve the agency and the self-determination of the patient are fundamental for the effectiveness of alternative approaches on health.

a. Laboratorio di Mondialità

The *Laboratorio di Mondialità*¹³ consists in three days of educational workshops organized by medical students (supervised by the Italian Secretary of Medical Students) in order to reflect on the social determinants that cause health inequalities. The meeting takes place every year since 2007, involving an average of one hundred students for each edition. The first *Laboratorio* met the exigencies of some students involved in projects of health cooperation in some developing countries, in order to critically reflect on these experiences that usually reproduce colonial attitudes and interventions, masked as “humanitarian operations” (SISM 201; Ceschi et al. 2015).

This initial topic has been successively extended to a broader reflection on global health, leading to changes in both contents and methodologies. In the last years, students have been increasingly taking in charge the education responsibility and organization. The prevalence of frontal lectures has been replaced by peer-to-peer methods, based on the horizontal circulation and sharing of knowledge. The use of multiple modalities of education fosters confrontation and debate among students, often putting into play their bodies and emotions – totally narcotized during traditional medical courses and apprenticeships. In particular, workshops based on the theatre of the oppressed have been useful to understand how the dynamics of objectification of the patient are reproduced on a global scale through a colonial attitude to medical intervention (fig. 2). Such an acknowledgement is necessary to question the whole symbolic process of separation of roles within the medical institution. The theatre of the oppressed does not merely consist in the interpretation or identification with a performed role, but it is aimed to a material incorporation of this, putting again the reality of the body at the center of the medical (meta)practice.



Figure 2. Theatre of the oppressed during the *Laboratorio di Mondialità*

During this workshop, the incorporation of the patient's role by the future MD gives the student the possibility to reactivate a material link with the patient, to physically experience on his/her own body the effects of the symbolic objectification. Indeed, this practice is fundamental to understand how the assumption and the assignment of a symbolic role is not limited to the creation of an abstract hierarchy of power and knowledge, but has material consequences on both medical doctors and patients.

b. Communicating death

Like the experience of childbirth is separated from the flow of life (Davis-Floyd 1994, 2001), also the moment of death is objectified and never exchanged as a social-cultural value (cfr. Baudrillard 1976). Nevertheless, with the irreversible progression of the disease, medical doctors have the task to communicate to the patient the reality of this condition and to manage the relational and emotional implications of this information. To this regard, *Medici senza Camice* and the C.U.R.A. (Centro Universitario per la Ricerca sugli Aspetti Comunicativo-Relazionali in Medicina)¹⁴ of the University of Milan have organized for two years (2012 – 2013) a three-day educational course in order to develop the communicative and relational competences of medical doctors in relation to terminal patients.

The course has involved more than a hundred students from several Italian universities and it has been characterized by an active and experiential didactics and a multimodal educational approach: very short frontal lectures (about 15 minutes), workshops, role playing, projections of both real and virtual medical visits, and a space for the evaluation of each activity and of the whole course. These spaces of exchange amongst peers were conceived as moments of fair and free discussion on the activities, in order to preserve the effectiveness of such a multimodal educational material. Indeed, students were led to stay focused on the patient's feelings and perception on both his/her disease and his/her relationship with the doctor. The main purpose of this educational multimodality was to question and overcome the limitations occurring during traditional apprenticeship, in which students are pushed to imitate and reproduce the doctor's medical practice of objectification, translating (and negating) the whole patient's complex experience of illness into the medical symbolic code.

The possibility of exchange among all the participants to the educational activity served as a model for future professional situations, in which the relationship between medical doctor and patient will be no longer based on the accumulation of symbolic power by the former, but on a fair exchange between the two figures. Facing together fear, rage, anguish and sufferings, avoiding the exposure of technical medical details and the simulation of an emotive detachment is not simply a way to establish a more human relationship with the patient; the aim is to acknowledge the limits of a bio-reductionist model in facing the issue of illness and death, and to adopt a new paradigm of medicine and health:

Healthy people are those who live in healthy homes on a healthy diet in an environment equally fit for birth, growth, work, healing, and dying; they are sustained by a culture that enhances the conscious acceptance of limits to population, of aging, of incomplete recovery and ever-imminent death. Healthy people need minimal bureaucratic interference to mate, give birth, share the human condition, and die. (Illich 1976: 106)

c. CSI: Self-determination of Communities

The CSI¹⁵ of the University of Bologna organized during the academic year 2013-14 the course in “Salute globale, determinanti sociali e strategie di Primary Health Care¹⁶”, open to students from every major. This course was based on the model of the “university extension”, a strategy of education and research set in the context in which the future professionals will work. This educational approach aims to blur the boundaries amongst communities, social and health services and university, by creating a space in which the activities are extended from a context to the other (Riccio et al. 2016: 226). The course involved 50 students from the School of Medicine and from the field of social sciences and humanities. It was organized in twice-weekly meetings for ten weeks; the first four weeks consisted in circular and horizontal lessons aimed to establish a fair relationship among students, tutors and professors, and to develop a common language among figures from different disciplines. The main purpose of this first part was not to restate given theoretical notions, but rather to raise doubts and questions among participants starting from the presentation of empirical cases and experiences. The second part of the course was conducted on the field, that is within the communities with which the CSI had already collaborated for other projects on public health; The aim of this second part was to involve the students in the practices of resilience undertaken by those communities and conceived as tools of promotion of health in a broader sense (ibid.: 228).

Acknowledging the embodied essence of the social processes related to health and disease (Csordas 1994; Quaranta 2006) helps the future professionals to conceive the therapy not in a prescriptive and individualizing form, centered on the modification of the individual attitudes, behaviors and life-style. During the course, such an educational aspect emerged in the passage from the lessons in classrooms to the experience on the field. For example, in classroom, during a debate around the possible therapeutic strategies to adopt on a patient affected by diabetes and living in a reception center, many students prospected changes in his alimentary habits and improvement of the physical activity. The direct confrontation with the patient in his living context has permitted to develop a complex reflection on the impact of life and work conditions on his health status, and to co-construct with the patient himself a therapeutic strategy in relation with the context (Riccio et al. 2016: 233). The inequalities of

the relationship MD-patient in the clinic, which mystify and, at the same time, reflect broader social inequalities, are overcome by the co-construction of a therapy strategy. In other words, the experimentation of new forms of social relationships and work through the involvement and the negotiation with the actors of a specific context avoids the reproduction of forms of subordination, which constitute a substantial part of the processes of disease.

The educational experience on the field has shown that knowledge and learning exist as forms of negotiation within specific social and political contexts (Lave and Wenger, 2006). The clinic, organized as a space of subordination by medical experts through abstract knowledge and technical competence of which patients are lacking, prevents the sharing of resources by all the subjects involved in the medical processes. The extension of the learning practices beyond the standard pedagogical context of university classrooms has legitimized communities, and their respective contexts as spaces of education, decentering the practice of teaching from the figure of the professor and/or the expert. The patient was no longer object of sanitary interventions, but active subject in the co-production of his/her own health therapy along with the (future) professionals (Franco and Mehry 2013).

Furthermore, alternative supports, such as extracts from a collective diary written by the students during the course, and a register with comments on the activities elaborated by all the participants, constitute a multimodal (meta)educational apparatus. By keeping the focus on the experience of all the participants to the educational/therapeutic practice, these educational multimodal devices and contents were aimed to rethink the medical methodology and epistemology beyond a series of dualisms such as theory vs. practice, medical doctors vs. patients, subject vs. object. As reported by a medical student who took part to the course, the experience on the field led students to comprehend that, as future professionals, they are not provided with a greater knowledge by virtue of which it is possible to assume a prescriptive role compared to the patients; quite the opposite, they share the same questions and doubts without the possibility to appeal to ready-made solutions. Another student affirms that the participation *into* the practices of a community has been one of the most relevant educational aspects of the experience, since it permitted to “touch with hands” the complexity of the social contexts in which the processes of health and disease are produced (*ibid.*: 239).

d. CSI: Maps and territory

The same course was renewed for the following academic year (2014-2015). The Participatory Action Research has been conducted in a peripheral area of Bologna, called “della Pescaraola”. This place has been chosen to offer the 25 students involved in the course a direct experience with a complex social context, in which a network of associations, especially of self-organized residents, emerged as a practice of social integration and cohesion against the marginalization of the periphery.

The course tried to build strategies of health promotion in a participatory form, starting from the existent networks of relationships, with the aim to further expand and strengthen these social links (Bodini et al. 2016: 144). Indeed, the involvement of the CSI was a consequence of the exigence come upon by the actors of the territory around the issue of health. Thus, the course has been conceived as collective path planned by all the people involved in a series of steps:

- a preliminary moment of expression, negotiation of the practical and educational needs of the actors involved in the project;
- co-construction of the multimodalities of meetings: registration, transcription and written restitution;
- evaluation of the activities and of the whole project both in anonymous-individual form and in group;
- co-writing of a final report as a basis for a future development of the path.

All these steps helped the participants to build a common basis of languages and practices to overcome the boundaries of disciplines and interests and, at the same time, to preserve and foster the heterogeneity and the hybridization of different knowledges. In particular, medical students had the possibility to go beyond the bio-reductionist paradigm that structure medical educational upon the dichotomies theory-practice and comprehension-application (Bodini et al. 2016: 145).

Besides the activities explicitly centered on health, such as focus groups and workshops on real pathological cases, the issue of health emerged from the observation and the participation to the daily activities of the residents in the territory. These moments assumed a relevant educational value for both students and residents. During meetings, a phase of self-analysis of the daily social activities in the territory made explicit the process of embodiment of social elements and relationships, and the direct effect of these factors on the status of health of the residents. The collective and reflexive aspect of the analysis transformed the object of the study in the primary subject-actors of the participatory action research (Bodini et al. 2016: 146).

Meetings and workshops were based on methods and approaches that privileged visual and creative forms of expressions. This material was never objectified/objectifying, but always subjected to a negotiation between what was documented and what was perceived. In particular, the use of maps created by the participants highlighted the presence (and the absence) of health places, resources and services in the territory in which the activities of the residents take place (fig. 3). This specific *semiotization* of the territory had a performative power (rather than representative) since it modified residents' perception and acknowledgement of the space according to their daily social life. In this case, the reading of the territory through the map did not consist in the objectification (and separation) of the space through its abstract representation; rather the map pointed out the active role of the territory in the life of its residents and, at the same time, testified the ability of the residents to redefine and transform the space according to their

health interests. As a result, the map became a relevant tool, within a multimodal educational set, capable to restore an active exchange between territory, residents and medical students.

If we look at health as a social construction, realized in the twist of different practices and discourses, both collectively and subjectively determined, we can practice a more effective work of transformation only by respecting and performing the complexity of these processes (Bodini et al 2016: 147, our tr).

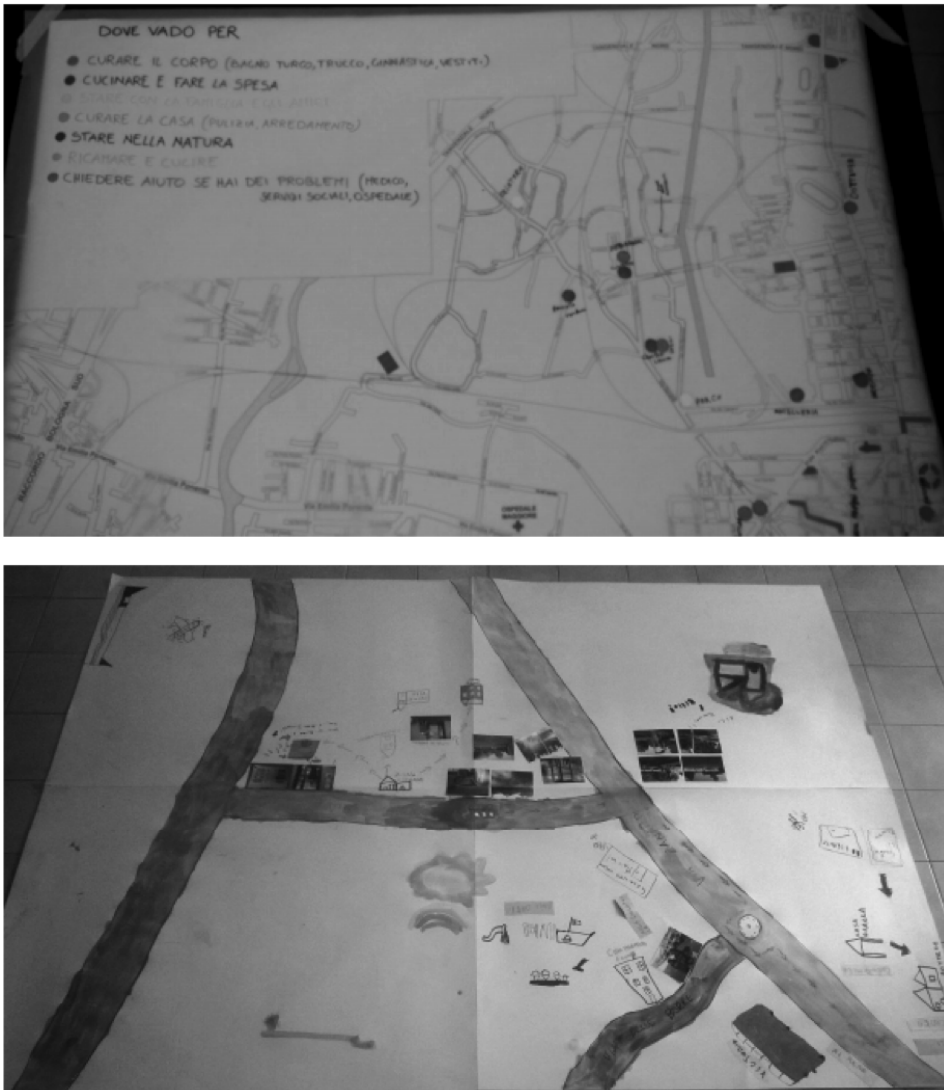


Figure 3. Performative maps of Pescara

e. GRUP-PA

Many students who took part to the courses and the experiences listed above have given life to other collective projects aimed to further develop a different idea of medical education. To this regard, the experience of GRUP-PA is relevant. GRUP-PA (Gruppo Permanentemente Aperto)¹⁷ is an informal group born in 2014 as the Italian node of the People's Health Movement (PHM). The PHM is an international movement born in 2000 dealing with the promotion of right to health for everybody, active in many countries all over the world. As it results from the report of the first phase of the project elaborated by the GRUP-PA, the connections between this project and the previous educational experiences are clear:

This network originates from a training experience in global health organized yearly, since 2006, by a medical students' association. When the first students involved started graduating from university, they decided to continue to study and discuss together the issues they all cared about (GRUP-PA 2015: 3).

One of the key issues of the project is the analysis of how civil society and social movements promote health through their transformative action on its structural social determinants. In particular, the work of social movements and organizations is focused on many fields and issues, such as the right to work, the right to housing, gender and sexuality, environment and relation with the territory, etc., that strongly concern health. Rather than a detached group of research, the GRUP-PA participates and contributes to the activities of these social groups, and consequently to a broader promotion of social health. Though the GRUP-PA does not represent an educational institution, it is involved in a rich and multimodal exchange of knowledge and practices with social movements and civil society. For this reason, this experience of Participatory Action Research constitutes a relevant moment of (in) health education for all its participants.

Conclusion

The analysis of a series of experiences in the Italian medical educational environment has been useful to acknowledge the relevance of the social context in shaping not only the differences between two medical (educational) approaches, but also the entity of the respective objects/values of practices. In particular, it is just the relation, or lack thereof, to the context the discriminant element that leads us to define the two paradigms as different. In the first case, bio-reductionism, as the hegemonic paradigm of medical education, is characterized by the obliteration of the relation with the context in which body, life, and disease take shape and place. The bio-reductionist perspective recreates a self-referential and apparently neutral clinical environment to approach these issues as *objects* of medical analysis and practices. On the

other hand, the alternative medical experiences grounds their practices on the social/material context in which health and disease acquire *meanings*.

In other words, while bio-reductionism looks at health and disease as objective realities - or at least tries to simulate and objectify such a reality through the reproduction of a symbolic code - the alternative approaches do not act on an ontological plane, but they consider health and disease in terms of socially negotiable conditions and values. If a cause-effect aspectualization is common to both the paradigms, the second approach tries to question the hegemony of the physiological discourse – and relative forms of power relations in the medical institution - by investigating the deep social and cultural factors that shape the *material* essence of health and disease, or at least their meaning. Therefore, the key difference between these two paradigms is at semiotic level. This is not just a divergence of formal perspective on the same physical object: the modality of signification of health and disease has a substantial role in medical education, practice, and in its capability to construct and transform reality. For the same reasons, multimodality has to be conceived not just in terms of plurality of educational devices, tools, *objects*, but by considering the variety of semiotic relationships amongst social actors (patients, medical doctors, students) and cultural values (health and disease) within a specific context.

NOTES

1 The myth of medical objectivity reproduces the same formal linguistic operations described by Roland Barthes: myth is a metalanguage which exploits and “impoverishes the richness” of a previous full linguistic system/sign (the empirical evidence), reduced to a mere form/signifier - “an indisputable image” - “from which the mythical meaning will draw its nourishment” (Barthes 1972: 117 - 18).

2 According to Barthes (1972: 151), the absolutization of a perspective, beyond its ideological and situated circumstances, is one the key ideological linguistic operations in the construction of a myth.

3 http://www.lescienze.it/news/2018/06/04/news/alzheimer_apoe4_accumulazione_amiloide_microglia-4006189/

4 https://www.repubblica.it/salute/medicina/2016/12/07/news/tumore_al_polmone_infezioni_e_virus_tra_possibili_cause-153628408/

5 The use of the category *form* vs. *formula* is taken from Baudrillard (1990) and used to highlight the progressive reduction of the socio-cultural forms of life to a bio-technologic paradigm (Agamben 1990).

6 For a deeper analysis on the linguistic and ideological use of “tautology” in mythical discourse, see Barthes (1972: 152).

7 Since the book has not been translated in English, we could provide the literal translation “Medical doctors without white coat. Patients without pijamas” that is still capable to highlight the purpose of the text to build a relationship of exchange between medical doctors and patients beyond the symbols that define their separated roles.

8 To this regard, semeiotics, the discipline through which medical students learn how to recognize and interpret symptoms, results paradigmatic of the whole semio-linguistic (symbolic) and abstract paradigm of medical education and practice.

9 Once again, the reference is to Barthes (1972, p. 118).

10 The mechanism through which an ideological order is established and mythologized by the exposure of the elements that apparently contrast/are in contradiction with that order is defined “inoculation” by Barthes (1972: 150).

11 The category of the *symbolical* by Baudrillard (1976) has nothing to do with Peirce’s use of the term *symbolic*. Actually, the two terms acquire two opposite meanings throughout our argumentation. From now on, in order to avoid any misinterpretation, we will use and refer to the category of the *symbolical exchange* just in terms of *exchange*.

12 Despite the large reference to the work of Davis Floyd, we do not individuate the *holistic* paradigm as the alternative medical approach to the *technocratic* and *humanistic* ones. The reason of this choice is methodological: we set our research in the Italian medical context, in which the paradigm of the *social determinants of health* (that we present as alternative) have been developed much more than the *holistic* one.

13 “Workshop of Mundiality”.

14 Research Centre on Medical Communication and Relation.

15 Centre of Study and Research in International and Intercultural Health

16 “Global Health, Social Determinants and Strategies of Primary Health Care”.

17 Permanently Open Group.

REFERENCES

Abbracciavento, Giuseppe, Cristiano Alicino, Elisa Cennamo, Viviana Forte, Carla Gueli, Silvia Minguzzi, Alessandro Rinaldi, Dina Rossi, Cristina Tumiatì, Nicola Valentino and Susanna Zecca 2013. *Medici senza camice*. Roma: Sensibili alle foglie.

Agamben, Giorgio 1995. *Homo Sacer. Il Potere Sovrano e la Nuda Vita*. Milano: Feltrinelli.

Barbier, René 2007. *La ricerca-azione*. Roma: Armando Editore.

Barthes, Roland 1972. *Mythologies*. New York: Hill and Wang.

Basaglia, Franco and Franca Ongaro Basaglia (eds) 1975. *Crimini di pace. Ricerche sugli intellettuali e sui tecnici come addetti all'oppressione*. Torino: Einaudi.

Baudrillard, Jean 1976. *L'échange symbolique et la mort*. Paris: Editions Gallimard.

- Baudrillard, Jean 1990. *La transparence du mal*. Paris: Editions Galilée.
- Bert, Giorgio 1974. *Il medico immaginario e il malato per forza*. Milano: Feltrinelli
- Bert, Giorgio and Silvana Quadrino 2002. *Parole di medici, parole di pazienti*. Roma: Il pensiero scientifico editore.
- Bodini, Chiara, Francesca Cacciatori, Anna Ciannameo, Nadia Maranini and Martina Riccio 2016. Appunti per una ricerca “in salute”: presupposti teorici ed esperienze concrete per una funzione politica e trasformativa della produzione di conoscenza. In: Ivan Severe and Nicoletta Landi (eds) *Going public. Percorsi di antropologia pubblica in Italia*. Bologna: Dipartimento di Filosofia e Comunicazione.
- Butler, Judith 1993. *Bodies that matter: on the discursive limits of “sex”*. New York: Routledge
- Ceccim, Riccardo Burg and Laura Camargo Macruz Feuerwerker 2004. O Quadrilátero da Formação para a Área da Saúde: Ensino, Gestão, Atenção e Controle Social. *PHYSIS: Rev. Saúde Coletiva* 14 (1): 41- 65.
- Ceschi, Ludovica, Giulia Gagno, Federico Landucci, Giulia Nizzoli, Giorgia Pacchiarini, Samantha Pegoraro, Anna Perulli and Benedetta Rossi 2015. *Il laboratorio di mondialità. Una palestra che ripensa la formazione medica*. Available from: <http://www.saluteinternazionale.info/2015/09/il-laboratorio-di-mondialita-una-palestra-che-ripenza-la-formazione-medica>
- Csodras, Thomas J. 1994. *Embodiment and experience. The existential ground of culture and self*. Cambridge: Cambridge University Press.
- Curcio, Renato, Maria Rita Prette and Nicola Valentino 2012. *La socioanalisi narrativa*. Roma: Sensibili alle foglie.
- Farmer, Paul 2003. On suffering and structural violence. Social and economic rights in the global era. In: Paul Farmer *Pathologies of Power. Health, Human Rights, and the New War on the Poor*. Los Angeles: University of California Press.
- Foucault, Michael 1973 [1963]. *The birth of the clinic. An Archaeology of medical perception*. Trans. Alan Mark Sheridan, London: Routledge.
- Franco, Túlio Batista 2007. Produção do cuidado e produção pedagógica: integração de cenários do sistema de saúde no Brasil. *Interface - Comunicação, Saúde, Educação* 11 (23): 427-438.
- Franco, Túlio Batista and Emerson Mehry 2013. *Trabalho, produção do cuidado e subjetividade em saúde*. São Paulo: Hucitec.
- Freire, Paulo 1973 [1967]. *L'educazione come pratica della libertà*. Trans. Linda Bimbi, Milano: Mondadori.
- Freire Paulo 2002 [1968]. *La pedagogia degli oppressi*. Trans. Linda Bimbi. Torino: EGA Editore.
- Genat, Bill 2009. Building Emergent Situated Knowledges. In *Participatory Action Research. Action research* 7 (1): 101-115.
- Good, Byron J 1994. *Medicine, Rationality, and Experience: An anthropological perspective*. Cambridge: Cambridge University Press.

- GRUP-PA 2015. *The Contribution of Civil Society Organisations in Achieving Health for All. Italy*. Available from: <https://gruppaphm.noblogs.org/files/2016/06/REPORT-English.pdf>
- ISS - Istituto Superiore di Sanità 2017. *Progressi delle Aziende Sanitarie per la Salute in Italia: la sorveglianza PASSI 2014-2017*. Available from: <https://www.epicentro.iss.it/passi>
- Krieger, Nancy 2011. *Epidemiology and The People's Health: Theory and Context*. New York: Oxford University Press.
- Lave, Jean and Etienne Wenger 2006 [1991]. *L'apprendimento situato. Dall'osservazione alla partecipazione attiva nei contesti sociali*. Trans. Gabriele Lo Iacono, Trento: Erickson.
- Loewenson, Rene, Asa C Laurell, Christer Hogstedt, Lucia D'Ambruoso and Zubin Shroff 2014. *Participatory Action Research in Health Systems: a Methods Reader*. Harare: EQUINET.
- Maccacaro, Giulio Alfredo 1979. L'uso di classe della medicina. In: Giulio Alfredo Maccacaro *Per una medicina da rinnovare. Scritti 1966-1976*. Milano: Feltrinelli.
- Marmot, Michael 2010. *Fair Society, Healthy Lives*. London: The Marmot review.
- Marx, Karl 1867. *Das Kapital*. Hamburg: Meissner.
- Moja, Egidio and Elena Vegni 2000. *La visita medica centrata sul paziente*. Milano: Raffaello Cortina Editore.
- Montero, Maritza 2000. Participation in Participatory Action Research. In: *Annual review of critical psychology 2*: 131-143.
- Napier, David 2014. *The Lancet commission on Culture and Health*. Elsevier.
- Ongaro Basaglia, Franca 2012. *Salute/Malattia. Le parole della medicina*. Merano: Edizioni alpha beta Verlag
- Quaranta, Ivo 2006. *Antropologia medica, i testi fondamentali*. Milano: Raffaello Cortina Editore.
- Quaranta, Ivo 2012. *Malati fuori luogo*. Milano: Raffaello Cortina Editore.
- Riccio, Martina, Nadia Maranini, Angelo Lorusso, Marianna Parisotto and Chiara Bodini 2016. Apprendere nella/con la comunità: una sperimentazione di estensione universitaria nella formazione in salute. In: Tulio Batista Franco and Riccardo Burg Ceccim *Prassi in salute globale*. Porto Alegre: Rede UNIDA; Bologna: CSI- Unibo.
- SISM – Segretariato Italiano Studenti in Medicina 2010. *Il Laboratorio di Mondialità: il nostro approccio per la formazione in Salute Globale*. Available from: <http://www.saluteinternazionale.info/2010/10/il-laboratorio-di-mondialita-il-nostro-approccio-per-la-formazione-in-salute-globale>
- Stefanini, Angelo 2014. *Capovolgere la facoltà di medicina? L'eredità di Giulio A. Maccacaro*. Available from: <http://www.saluteinternazionale.info/2014/04/capovolgere-la-facolta-di-medicina-leredita-di-giulio-a-maccacaro>
- Sydenham, T. (1848). *The Works of Thomas Sydenham, 1624-1689, vol. 1: Medical Observations Concerning the History and Cure of Acute Diseases*. Trans. Dr. Greenhill, London: Sydenham Society.

Twaddle, Andrew and Lennart Nordenfelt 1993. *Disease, illness and sickness: three central concepts in the theory of health*. Linköping: University SHS.

World Health Organisation 2008. *The World Health Report 2008: Primary Health Care Now More Than Ever*. Geneva: WHO.

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