Original article: history of medicine

The dialogue between the worlds of art and science

Giuseppe Armocida, Ilaria Gorini

Centre of Research in Osteoarchaelogy and Paleopathology, Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy

Abstract. How to place today medicine in the overall cultural context remains an open debate. The figure of the physician requires scientific knowledge, technical ability, but must be sustained by a sound humanitarian ethos, stressing the aspects related to communication. We should always keep in mind that the physician shall master instruments based on creativity, artistic valence, centered on the individual, rather than methodologically founded procedures, in a comprehensive and holistic frame.

Key words: humanitarian ethos, communication, cultural context remains

Today, talking and discussing about *Art and Science*, it is relevant to underline also a reflection on medicine's world. The dialogue between the worlds of art and science is so strict and so powerful to claim for a constant, open information exchange flow. Similarly, the dialogue between science and medicine and between art and medicine is constant, where perspectives are different and the outcome also follows different paths. We can catch interactions and intersections between art and science and between art and medicine but, whereas current scientific methods are consolidated and shared, the basic doctrines of medicine are not as such.

Our considerations about the positioning of medicine in culture remain oscillating. In the classic period, medicine was still seen as a mechanical art, i.e. not speculative, concerned with a practical utility, excluded from the seven liberal arts, which were divided in *trivium* (grammar, rhetoric and dialectic) and *quadrivium* (arithmetic, geometry, astronomy, music). However, today, we need to re-affirm that the figure of the physician is characterized for his scientific and technical knowledge, complemented by humanitarian ethos, but with the remark that medicine cannot neglect a component based on a more comprehensive communication. We need to use the objectivity of biomedical instruments, but the quality of the clinical act is also bound to an effective and artistic capability for empathy, intuition, which each single should have, because you cannot learn it by studying. This is a real problem in our current times. We can accept the mono-and firm-directionality of biomedicine, where the feeling is that the clinical intuition and the single perspicacity no longer have the importance they had in the past. This brings us back to different considerations and reminds us that, still today, being a good scientist is not at all what is required to be a good physician. We need to step back from our daily work in order to get full awareness on how much the operations in medicine have changed over the last decades. However, if we think that fifty years ago our knowledge was much less than at present, as part of the compulsory culture in the field of medicine, we need to acknowledge that at the time, the words of a basic, simple, family physician were listened to and better trusted. He was authoritatively mastering the art of medicine.

Let's have a look at an illustration taken from the volume on mental illnesses by Esquirol (1838) (Fig. 1). We should not look at it as the image of a woman in a French psychiatric hospital, but as the image of a part of medicine, worried and imprisoned in its designed retainer device.

Similarly to the patient asking for a remedy, also the person asking for scientific explanations runs got

the risk to be imprisoned in them. Some of the medical doctrines that have affirmed themselves, and adapted to the current conceptual model, have become real straightjackets, from which is difficult to escape, even when the model is no longer convincing and when other doctrinal perspectives have become evident, with new seductions (1).

At present, medical training privileges the analytical approach, through the sub-division of structures and the investigation of single functions. In clinical action, the observation is limited to the borders of patient's organism. It is uncommon that this observation is widened to consider the network of relations in which the same patient is integrated. The continuous discoveries bring us to consider the perspective of the biomedical explanation as the only possible way. However, without incurring the risk of limiting our considerations to a pure cultural exercise, it is useful to make some considerations on the *clinical line of reasoning*. To specify what *clinical line of reasoning* means, we need to examine the expression in two different ways: as the set of the rational inferences that the physician carries out for his diagnosis and explain the pathologies observed, or as the set of mental processes, which the physician uses to understand the situation of the patient (2, 3).

In the first case, we are faced with a sum of arguments, part of the rational process, while in the second case, we are faced with a wider complex of mental acts, which might be components of different disciplines, from logic to psychology, to hermeneutics. The whole problem concerns the ultimate nature of medicine: is it only a natural science or a more complex discipline, which makes use also of mental procedures called sciences of the spirit, distinct from natural sciences, because referring to historical-social complexity of the human being? A fundamental point of this epistemological concept repels the attempt to re-conduct the knowledge of the human world to a model of a common explanation, similar to the procedures used in natural sciences. What characterizes the natural sciences processes is *explanation*, whilst in the science of the spirit, the most important process is *understanding*. We need to start from the assumption that human reality has an external side, which can be investigated by natural sciences, but it also has an inner side, which can be reached only by the science of the spirit. Obviously, the hermeneutic knowledge cannot be considered similar to that of natural sciences; according to hermeneutics, any human knowledge will always remain an interpretation and will never reach a final objectivity.

Medicine has always been considered a rational art, but this concept is no longer sufficient today. A deeper investigation is needed on the nature and the form of the rationality used. In the last years, a methodological concept has been affirmed, according to which, the medicine should be subject to a form of rigid rationality, based on the use of evidences delivered by controlled clinic experiments. Many affirm that *Evidence Based Medicine* – name with a powerful set up – is the best system we know and a needed condition to make good medicine; without a method to sum up and transfer into practice scientific evidences, medicine becomes a mass of arbitrary and dis-informed decisions (4).

As a matter of fact, the problem of the rationality of medicine should not be presented in such a drastic dichotomy. In the arguments which are components of the clinical way of reasoning, in the broad sense, non-rational arguments can find their place? In other words, medicine, which is part of natural science, can place its trust in the sciences of the spirit and host, in its arguments, hermeneutic arguments? As the science of the spirit is an instrument of a thought, different from the rational one, the idea that physicians could employ them, could put under discussion the scientific value of medicine. In reality, as a paradox, the more scientific investigation picks up experimental data about the biologic structures, with a method of rigorous analytical deduction, the more synthesis seems to become uncertain and stuttering. The number of unknown factors increases and the science cannot answer all questions. It is not a secondary problem, then, to ask why the dominant medical model cannot give exhaustive explanations to the aggressiveness of many pathologies, which remain mysterious, with their aetiology. We should also consider that anthropologists contest some methods and recommend studying the individuals in their precise socio-cultural context, which has an influence on the individual life choices, on their nature and also on the appearance of some specific illnesses.

A constant reflection on these themes should be the rule for the best practices, remembering that in clinic is absolutely needed to specialize in instruments

based on artisanal, artistic valences and on creations, centered on the individual in a comprehensive and holistic frame and not limited to operation which are methodologically based.

Today, biomedicine has not only delivered the basis for the scientific study of illness, but it has also become a peculiar perspective concerning illness. It is the dominant model. The sum of attitudes and of certainty of physicians originates from this model, long before they start their professional training. The model has become a cultural imperative, thus avoiding considering its limits, i.e. it has become a real dogma. A model is reviewed when it can no longer explain the available data in a satisfactory way. A dogma, on the contrary, imposes that incompatible data must adapt to the model, or they must be excluded from consideration. The biomedical dogma requires that illnesses are defined in terms of alterations of underpinning physical mechanisms. This allows only for two alternatives through which illness and behaviour can reconcile: the *reduction theory*, according to which all behavioural aspects of illness must be explained with physic-chemistry principles and the *exclusion theory*, for which, all that cannot be explained in those terms, must be excluded from the theory related to illness. Among physicians, prevails the certainty that those following the reduction theory are the true believers, while those following the exclusion theory are the apostates. All those who put under discussion the model, looking for a more effective one, are labeled as eretics (5, 6).

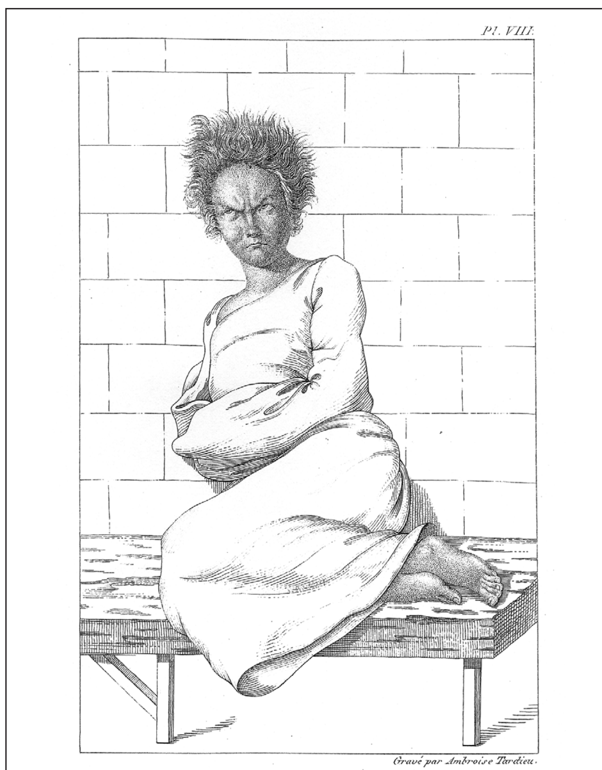

Figure 1. The straitjacket from *Des maladies mentale of Jean-Etienne Esquirol*

Today, there is a very strong wish for a cultural uniqueness in facing the needs for doubts and meditations, towards a civilization, which constantly increases its complexity. May be we should fully understand that we cannot apply to our times, the lemma *Zwischenzeit*, used by theologians to express the concept of a transition period between something which is not yet fully dead and something which is not yet born. May be we are truly one of those generations which, having the duty to lay down the foundations of the future, in many areas of the human life and also in medicine, are busy with the destiny to build up things, but without knowing the project.

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Correspondence:
Ilaria Gorini
Centre in Research Osteoarchaelogy and Paleopathology,
Department of Biotechnology and Life Sciences,
University of Insubria, Varese, Italy
E-mail: ilaria.gorini@uninsubria.it