Pathology and Human Existence.

Foucault's The Birth of the Clinic *and Canguilhem's* The Normal and the Pathological

Sverre Raffnsøe,

Department of Management, Politics and Philosophy,

Copenhagen Business School

Abstract

In a period spanning roughly from the 18th century to the middle of the 19th medicine underwent a radical development making medicine a science of the individual in a way radically different from the past. The paper describes this development and its impacts through a reading of Foucault's *The Birth of the Clinic* and Canguilhem's *The Normal and the Pathological*.

The paper argues that the development in medicine – from nosology to pathology – changed the conditions of possibility for medical experience. It changed the way medicine conceives of itself and its object with the effect that the world achieved a new objectivity and obligatory character for us. The paper goes beyond Foucault by elaborating how the changes in medicine pointed towards a new general ontology, a new understanding of life and death, as well as a new form of normativity and human existence. On the threshold of the 19th century man thus began to establish a new relationship to himself.

Keywords: medicine, pathology, Foucault, Canguilhem, normativity, humanity, disease, individual, life, death

> *"Medicine is a science which hath been…..more professed than laboured, and yet more laboured than advanced; the labour having been, in my judgement, rather in circle than in progression. For I find much iteration, but small addition."*

Thus wrote Francis Bacon in *The Advancement of Learning* in the 17th century (Bacon 1994: 84). It would seem that, already in Bacon's time, this statement was misleading. Today, it is even more difficult to maintain. In fact, the difficulties besetting this view appeared not long after the penning of Bacon's famous words. In the interim, medicine has undergone a radical development. This development is particularly striking when contemplating the results of practical therapy and the treatment of formerly incurable diseases. These developments have, moreover, taken place amid epistemological sea-changes and changes in the way that medicine conceives of itself and its object.

In the paper I will be seeking to intimate these changes to you, starting with a development that took place Francis Bacon – in fact in a period spanning roughly from the 18th century to the middle of the 19th. These changes constitute the developments within medical science described by the early Foucault in his work *Naissance de la clinique (The Birth of the Clinic),* published in 1963. According to Foucault, medical scientific experience underwent a decisive transformation during this period. New conditions were established for the ways in which the world could appear to us, with the effect that the world achieved a new objectivity and obligatory character for us. It is these conditions that are examined by Foucault in his work.1 To a certain extent, therefore, one can, in this connection, talk of a 'phenomenological' inquiry.

Foucault works with what he sees as an obvious transition from one episteme to another. But this does not mean that he maintains any incompatibility or abrupt, conclusive

break. In keeping with his other works, he attempts to follow the contours of a piecemeal transition by plotting a series of smaller displacements. In his own words, he asks: "Is this discontinuity really a discontinuity? Or is it rather a question as to which transformation was necessary? For me, this is not a way of confirming discontinuity in history. On the contrary, it is to place it on the agenda as a problem that has to be solved" (Foucault 1984: 58, 61).

In addition to this, Foucault seeks, too, to elaborate the implications of the changes he sets out to describe. And on closer examination, they prove to be particularly far reaching. With these changes, we witness the birth of a new understanding of disease and of modern pathology – or study of human suffering. In *The Birth of The Clinic,* Foucault describes the birth of pathology in the modern sense, so to speak. As well as changing our perceptions of health, a new juxtaposition of the relations between sickness and health is implied. Moreover, perceptions of what life and nature are also change. All this has consequences for the perception of human existence and its placement within the scheme of things. As a knowledge of health and morbid states and therapeutic skills in the treatment of these states, medicine could prove to be an excellent introduction to concrete human problems and to the humane in concrete form. Medicine is a science of life that concerns itself with life and death. It is also however, an "art de vivre" – a way of life. It can also be construed as a manner in which humankind relate to themselves and their own lives in a very practical but at the same time decisive way: a means of human self expression, an expression of human life.

Foucault often commented that he generally saw the first half of his authorship (from 1954-71) as firmly planted within the horizon circumscribed by Canguilhem. In 1978 Foucault could thus indicate how it was in his early works that "his point of view and field of research (objèt)" had been "the history of science…I was a pupil (élève) of science historians, raised by Canguilhem in particular" (Foucault 1994: 583). This would seem to be all the more

relevant when Foucault turns his attentions to the history of medicine, which was Canguilhem's area of expertise as a historian of science and qualified medical physician. *The Birth of the Clinic* can be read as a further elaboration of the themes that concerned Canguilhem in his main work *Le normal et le pathologique (The Normal and the Pathological),* which was published in stages from 1943 to 1966, prior to and after Foucault's body of early works. Here, where Canguilhem is preoccupied with the history of medicine, he is able - due to the overlap in their respective productive activities - in the closing passages of his work, to praise *The Birth of the Clinic* as "admirable" and "moving" (Canguilhem 1991a: 215). Due to this congeniality, I think it pertinent to include aspects of Canguilhem's work in my treatment of Foucault. According to Foucault's introduction to the English edition of Canguilhem's *The Normal and the Pathological,* Foucault had learned that an interest in the history of science meant continuing the spirit of the Enlightenment in an enlightened manner, as Kant had suggested in his essays "Was ist Aufklärung?" ("What Is Enlightenment?") and "Der Streit der Fakultäten" ("The Conflict of the Faculties") (Canguilhem 1991b: 7-24). Just as, in these essays, Kant asks what enlightenment is, one could inquire, with the help of the history of science, as to the nature of the disposition and normality that makes itself public at a given time and in a manner that means that a complete regression is unthinkable, and which, at the same time, distinguishes us from the past. What is this progress we are part of, and what does it imply?

The paper describes the transition from nosology to pathology in medicine in detail, analysing how this development changed the conditions for the possibility of medical experience.

Subsequently, the paper expounds the direct result of the change. With the transition from a medical science focussing on the knowledge and classification of various

kinds of human disease to medical science conceived as a study of the practical treatment of pathological reaction and human suffering, a new form of objectivity and scientific discourse emerged, establishing a new positive knowledge of the diseased organism and reducing the personal descriptions of the patient to mere subjective feelings. Concurrently, the ontology of medical knowledge changed. In classificatory medicine, the general still featured as the legitimate object of knowledge, and knowledge of the sick individual was in principle unattainable. With the arrival of pathio-physiology, knowledge of the individual became both possible and necessary. In the same course of events, life as an all-embracing, unifying obscure force and dynamic appeared, replacing the older notions of nature and a natural order. Disease was no longer a particular that reflected a universal being, but became another form that life could assume, or life's pathological form. Describing disease as a deviance in function, pathology was brought into an intimate relationship with physiology.

On closer examination, however, the implications of the transition are even more far-reaching. Pathology is an experience of the sick individual which relates him or her to a qualitative better mode of function. With nosology, normativity in the field of medical science still possessed the character of immutable and unalterable law, whereas modern medicine installs the norm as the common measure towards which we continually advance, and under which we are already in the process of being integrated. Recognising the natural social individual as something which could be integrated by being ameliorated, medicine reveals its own idealising tendency. At the same time, medicine revealed itself as a modern social science which – in both its individual and social forms – and like a number of other social sciences that emerged shortly after modern pathology, contributed to a constructive, integrational project. At the same time, the human individual that emerged as the object of medical knowledge was a finite being that, at every turn and stage of its development, was

inscribed with its own ubiquitous decomposition and death. An ever-approaching death was no longer considered an inevitable fact to which we had to resign ourselves, but as a challenge to be addressed and overcome. In this way, medicine insinuates itself as part of modernity and the modern project. Modernity represents a project doomed to failure because of the inevitability of the threats it seeks to hold at bay; but by virtue of its abortive nature, modernity continually calls for more of itself. Modernity as an uncompleted and interminable project continually calls for its continuation.

The article takes Foucault's *The Birth of the Clinic* as its starting point, but draws on other sources too. It embraces, more or less explicitly, a number of Foucault's historical analyses, including his history of science in *The Order of Things*, his charting and interpretation of changes in patterns of normativity in *Surveillance and Punishment* and *The History of Madness,* as well as his later works on social medicine.

Thus the article seeks to clarify and explicate transverse aspects common to all his analyses; analyses which have hitherto generally been examined and understood in isolation from one another, or revised to an extent that has precluded the drawing of coherent comparisons.

These themes are further elaborated on, partly through a comparative reading of Canguilhem's congenial analyses of normativity and developments within medicine in *The Normal and the Pathological,* and partly by the drawing of perspectives to the broader context of literary, scientific, philosophical and socio-historical developments of the 18th and 19th centuries.

As a result of its scrutiny of detail, Foucault's *Birth of the Clinic* points beyond its own limits, facilitating a synoptical view of and insight into a thoroughgoing

systematisation; a systematisation vaguely hinted at in what is otherwise a relatively hermetic work.

These additions to a work restricted in its focus to the development of one scientific discipline over a few years in the period around 1800, identify and examine extensive common trends and implications which were present in Foucault's work in embryonic form only; seeking to explicate connections, threads and thoroughgoing ramifications that link disciplinary and social tendencies past and present at cross-sections with chronological time. The article seeks to demonstrate how forms of knowledge, sociality and social normativity that still have relevance for the present were originally formed; forms that still exert a normative influence on our concepts of humanity and the humane, society and the social, and our self-reflexitivity and self-understanding today.

I. The Birth of Pathology

In *The Birth of the Clinic* Foucault turned his attention to the question of medicine and the treatment of disease. The doctoral dissertation that preceded it had been concerned with the evolution of the modern experience of madness. As Foucault indicates in the introduction to the former work, his concerns had by this point broadened, aiming as he was "without any prescriptive intention, to determine the conditions for the possibility of medical experience as it is known in the modern epoch", and thus concerning himself with the evolution of the modern perception of disease in general.

With the arrival of the modern clinic, a new space had been created, in which we could talk about - and relate to - disease, and in which a new relation between doctor and patient could emerge.

Nosology

In the 18th century, established medical science and practise had primarily had the character of a nosology – or science of diseases – to the extent that here, the distinguishing features of any particular outbreak of disease in its natural environment had been the object of study, in order to reveal the disease as clearly as possible in its crude and unmediated generality. In this way, it had been possible to establish a general classification of the various categories of disease and localise individual instances within a general system - or nosography. In his works *Nouvelles classes des maladies* (*New Categories of Disease*), published in 1831 and *Nosologia methodica* (*Methodological Nosography*) published in 1763, François Boissier de Sauvages thus divided diseases into 10 categories, 295 genera and 24,000 species. And in the *First Lines of the Practise of Physic*, which he published in 1778-79, William Cullen was still primarily interested in the elaboration of such a nosography, albeit in a somewhat more limited form. He operated with just 4 categories of disease.

In classical medicine, doctor and patient entered into an intimate, personal relationship (Foucault 1994: 517). The physician was interested in - and started with - the irreducible characteristics of the particular instance of the disease and the immediate, opaque and inarticulate similarities between them (Foucault 1990: 5/ Foucault 1997: 7). The reason for this was rooted in the intention of creating clarity by revealing the rational order of nature manifest in these similitudes. For those who carefully observed and reflected upon such a concentration of similitudes, the clouds would part in the individual instance, enabling the emergence of a clear and distinct perception of the specific species of disease and its effects.

With this approach, and the elaboration of a knowledge of reality drawn up in a table establishing the identities and differences between classes of disease, medicine joined in the general attempt to establish taxonomies that was so characteristic of the age. Taxonomy

came to expression, too, as an archetype in the natural history of the age, in botany in particular, for example, in the form given to it by Linné (Foucault 1994: 517). As with natural history generally, classical medicine was classificatory, and "botanised" in its efforts to determine various species and their defining characteristics.

If, for the natural sciences, the natural order of things consisted in a range of species or secondary substances, then classical medicine described how it was that the various species of disease worked in particular instances (Foucault 1990: 6/ Foucault 1997: 8). The human body was not the primary seat of a given disease; it was rather the case of the species' generality being represented through the particular instance.

The role of medicine and the physician was, as far as possible, to get the diseased organism functioning naturally and healthily again. For this reason, medicine had orientated itself in 'dietetics' – the science of the prescriptions and ordinations of lifestyle, including nutritional regimes, which the individual had to minister to himself. In this sense, it was both possible and necessary for the individual to be a physician "unto him- or herself". With this kind of treatment, a disease would either run its natural course, to terminate in cure where possible, or, alternatively - and where in accordance with the individual disease's specific laws – to end in fatality.

Against this backdrop, then, classificatory medicine operated with a notion of diseases having a "natural course". A disease would most clearly manifest its most basic characteristics, or essence, in an environment where people lived in primitive conditions, relatively free of other diseases and the risk of compounding infections. When a disease appeared within the context of the complex conditions of civilised society, however, it would be prevented in running its direct course; the picture of the disease would thus be

correspondingly less accurate, and the ordination of a cure more difficult (Foucault 1990: 18-19/ Foucault 1997: 18-20).

A ramification of this view was medicine's critique of the hospital, which was considered to be an environment where multifarious diseases blurred and complicated the general picture of the specific disease, preventing it from exhibiting its species-specific characteristics. The artificial environment in which new kinds of disease were gathered not only exposed the patient to new dangers, but also obscured the course of a disease and provided fertile conditions for new cross-species of disease, which would further complicate the picture of the original type (Foucault 1990: 1-19/1997: 3-21). Therefore it was believed that diseases were best studied outside the walls of the hospital compound.

Within the context of medicine's positive formulation of type or species, there was the inception of a tacit sense of the influence that the environment had on disease. Disease was conceived of as a general natural entity that could take hold of the individual due to a change of conditions in the individual's environment. Where classical medicine had to identify and to explain the genesis of a particular disease, it would do so by referring to the lifestyle and living conditions of the individual; to the quality and the constitution of the air or the earth, for example, or to diet, climate or seasonal change. In contrast to the efforts of the crisis therapy of the Middle Ages and the Renaissance to seek appropriate cures for specific diseases, the efforts of classical medicinal science no longer focussed on the disease itself, but on the combating of disease through the selection of the appropriate time and place to change the conditions that had facilitated its development. Within a horizon where disease appeared as a natural phenomenon, it could be perceived and treated as a phenomenon that obeyed the natural laws of the surrounding environment (Foucault 1994: 517).

In classical medicine, environmental influence figured chiefly as something with negative effects; effects which had to be combated. In the classificatory brand of medical science, the particular effects of the environment were not, as of yet, an object of knowledge as such, but more a marginal conditional for medical knowledge.

Pathology

During the course of the 18th century, a new sense of the unique instance of disease and its relation to extraneous circumstance and other similar instances began to emerge in medical science. This made its presence felt in the concept of the epidemic. In the attempt to explain the sudden widespread non-endemic, recurrent appearance – or, indeed, absence - of diseases such as smallpox, dysentery or the plague with reference to particular times or particular places, medicine no longer referred to the general character of a given disease, but to the specific circumstances that had facilitated its outbreak. The reason for an epidemic was not the plague as such, but, for example, the city of Marseilles in 1721 or conditions in Rouen in 1769. The general characteristics of a given disease were no longer decisive. Instead it was the unique process, varying as it did, from one epidemic to another that had become decisive; a process that bound the appearances of diseases at certain historical times and places to the context in which they featured as an integral part. This context can be characterised as a series of global singularities, none of which entirely allowed of a detailed repetition.

In a continuation of this approach, the specific instance of a disease came to play a decisive role as something other and more than a particular outbreak of a general species of disease that had to be placed within the taxonomic tables of medicine. To the extent that it demanded to be understood in its relation to a unique and mutable social environment - which had not merely conspired in its outbreak and influenced its course, but also enabled it to enter

into relations with a range of other parallel instances together with which it formed a series - a particular infliction emerged as something irreducible.

This displacement represents an end to medicine's definition of itself as nosology or as a classificatory discipline, and marks a shift towards pathology. Medical science becomes a study of the practical treatment of human suffering and an interest in the causes and the courses of human diseases, of pathological reaction.

This displacement means that a disease's environment is perceived as something other and more than a mere obstacle. The artificial environment of the hospital had, up until this point, first and foremost had the double function of an institution designed to provide care for those suffering from acute illness or injury, while at the same time serving as a means of protecting the social order beyond its walls. The sick needed help; but due to the risk of infection, due to their inability to work or to be productive, due to their destitution and displacement, and thus due to the chaotic threat they posed to the social order, they had to be isolated. The typical inmates, therefore, were not the diseased as such, but those already condemned to death. Within the walls of the hospital, the patients could be given the last material help that they required and offered spiritual redemption. The hospital was a place where one could die a proper death; its primary function was the function that today we attribute to the hospice, even though the dying process was often more protracted and quite different to the dying process today. In so far as the hospital was a means of assuring combined assistance and protection, and not an institution charged with the responsibility of curing the patients interned there, the hospital and healing had become two distinct things. The artificial environment of the hospital prevented healing; healing which was better practised at home, in the bosom of the family.

With the emergence of the modern clinic at the beginning of the 19th century, a new, socially created, specialised environment was established that would come to play a positive role. The artificial environment of the clinic was arranged with a view to keeping a running check on the course of a particular disease and its relation to other diseases, with the aim of establishing a cure that would facilitate the return of the patient to a life in society. In this way, a new context of experience was formed, in which medical knowledge could emerge, be subjected to testing and disseminated.

In certain respects, the clinic accepted in full the implications of the means of contact with disease that had formerly been established only as fleeting or episodic phenomena in the treatment of epidemics. Within the artificial environment of the clinic, a continual influence could be exerted on diseases, and a campaign for the open, total registration of their occurrences and similarities be launched. These thoroughgoing forms of treatment facilitated the establishing of a relation to, and knowledge of, the specific, unique instance of the outbreak of a disease, and its connections with the surrounding environment.

As the medical examination began to aim for an exposition of the deeper connections concealed in particular instances, the medical gaze achieved a new intensity and penetrative character. It made incursions into its object of study in the attempt to identify the seat of a disease; the primitive temporal and spatial location in which the pathological state had its origin and from whence it spread. The localisable seat of the disease superseded class or category as the chief motivational foundation of medicine; and in the identification of a disease's concrete birthplace, medicine became a science of the individual in a way radically different to the past. It discovered and began to penetrate the organism that acted as host to the disease. The unique, sick individual became the object of study for medical science; an

object that medicine could not simply suffice to perceive or contemplate, but had to explore and cast light on.

According to Foucault, the efforts to find the original seat of a disease through the penetration of the individual came to tangible expression in clinical anatomy which, at the beginning of the 19th century and in spite of their theoretical differences, had been advanced through the results of the work of the famous French physicians M.F.X. Bichat and R.T.H. Laënnec. These result were made public by Bichat in his *Traité des membranes (A Treatise on Membranes)* and *Anatomie générale (General Anatomy)* in 1799 and 1801. Laënnec published his *Traité de l'auscultation mediate (A Treatise on Indirect Auscultation)* in 1819.

The use of dissection in clinical anatomy was not new; it had already been practised in classical medicine. The use of dissection as a technique that could be systematically combined with clinical analysis leading to the identification of the concrete source of origin of disease in the individual through autopsy was, however, an innovation. The pathological anatomy of Bichat and Laënnec attempted to locate the origins of disease in the lesions of the inner tissue of the diseased individual. In direct opposition to Laënnec, the physiological medicine formulated by F. Broussais brought this penetrative movement to its logical conclusion by claiming that the locus of a disease had to be situated deeper within the individual, among the somewhat more obscure infections and irritations of tissue that organ lesions were mere visible signs of.

With *Examen des doctrines médicales (An Examination of Medical Doctrine),* published in 1816, instances of disease had become temporally and spatially localisable entities, the placing of which was no longer bound to the order of the visible, but became visible precisely because they were local. With Broussais, disease was no longer seen to be a species capable of justifying its own existence, but a state of infection or inflammation that

arose through a potentially irritable tissue's meeting with an infective cause. Broussias thus attempted to describe a disease as a generalised structure that could only be understood and demonstrated as a localisable attack on the normal general function of the organism; a phenomenon with a particular and specific spatio-temporal habitat, but which was not necessarily open to observation itself.

In this sense Broussais was taking the step from the pathological anatomy of Bichat and Laënnec into pathio-physiology. Bichat had criticised Giovanni Battista Morgagnis pathological anatomy because it had localised the main seat of disease in human organs. Morgagni asserts this in, for example, *De sedibus et causis morborum (The Localisation and Causes of Diseases),* which was published in 1761. The epicentre of the disease was rather different kinds of tissue, i.e. muscular tissue, nerve tissue and connective tissue, found at various locations in the human body, but which can be identified due to their appearance and manifold vital properties. Disease was primarily to be thought of as a change in these types of tissue, and not as changes in organs as such. Broussais surrendered altogether the idea of determining a disease by domicile, seeing the capitulation as a natural step. Bichat's true legacy had not been locality as such, but the recognition of the physiological as primary. Diseases were not to be understood as independent entities, but as the result of changes in, or modifications to, the normal functioning of the human organism.

According to Foucault, Broussais' description of illness as the pathogenic reactions of the organism to challenges posed by the environment proved to be an essential ingredient in the modern determination of disease which would come to serve as the basis for the positive medicine of our epoch.

"The space of the disease is (…) the very space of organism. (…) The medicine of diseases has come to an end; there now begins a medicine of pathological reactions, a structure of

experience hat dominated the nineteenth century, and to a certain extent, the twentieth, since the medicine of pathogenic agents was to be contained within it, though not without certain methodological modifications" (Foucault 1990: 196-97/Foucault 1997: 191).

However, this change in the understanding of disease and health did not necessarily lead to immediate progress in therapy. Broussais used, for example, bleeding as a direct consequence of his conception. The transformation that brought pathological physiology to the fore did, however, facilitate Rudolf Virchow's examination of the occurrence of diseases such as cancer, as a result of abnormal changes in cellular function and cell division. Virchow's findings were published in *Die Cellularpathologie (Cellular Pathology)* in 1858. In continuation of Virchow's work, in his *Introduction à l'étude de la médicine experimentale (An Introduction to Experimental Medicine)* in 1865, Claude Bernard was similarly able to show that the pathological lesions of organs and tissue identifiable through autopsy were merely effects of a given disease and not its causes. The correct study, therefore, was that of the function of living organisms, which could be achieved through empirical experimentation under controlled conditions.

II. Immediate scope of the transition

A New Objectivity

On the basis of my attempt to describe a thoroughgoing development within the field of medicine, we can try to establish a general overview by retrospectively seeking to link the overall changes within medicine to the emergence of the anatomo-physiological clinic and the evolution of pathological anatomy and physiology.

With the transition from nosology to pathology, a new form of objectivity and scientific discourse emerged. Some will argue that medicine first became scientific with this

transformation. New forms of perception, practise and prognosis built a foundation for new knowledge. With the inception of the clinic, unprecedented methods and means of collating experience came to light, shaping scientific discourse and manifesting themselves in scientific practise and its perception of the sick, while at the same time introducing a clear transformation of the scientific institutions of medicine. According to Foucault, this new, thoroughgoing synthetic schematisation plotted the a priori conditions for the context in which the world would appear for medical knowledge.[2] It reorganised or restructured the object of medical science, establishing a new, positive knowledge of the diseased organism.

This transformation was clearly visible in the shifting point of departure for the diagnosing of diseases. Formerly, diagnosis had been based on the patient's own description of his state and personal medical history. With Bichat, new direct methods of observation emerged, based on data gathered through autopsy. With Laënnec, auscultation, or the practise of listening to the internal sounds of, for example, the lungs or the heart in order to perceive the inner functioning of the body, achieved its breakthrough – thus enabling the circumvention of the often misleading personal interpretations of the patient. Laënnec thus paved the way for a more adequate representation of the patient's inner state through the invention of the stethoscope, the diagnostic strengths of which he described in 1819 in his *Traité de l'ausculation médiate* (A Treatise on Indirect Ausculation; Laënnec 1819: 2-14). Within this new context of objectivity, the personal descriptions of the patient dropped out of the equation as mere subjective feelings. As a consequence, in the middle of the nineteenth century, the German doctor Robert Volz was able to claim that "the patient has become an object".

A New Ontology

An equally important development took place with the displacement of the ontology of medical knowledge, where new objects of knowledge began to take shape.

Through the individual instance and its immediate analogies to other cases, nosology had sought to recognise the rational order of which the disease was part. Through classificatory medicine, an insight into the ways in which a particular disease belonged to certain universal spatio-temporal classes and species of disease could be achieved. These categories were natural to the extent that they iterated the truth with regard to the particular instance, and ideal in the sense that they were given only in impure form – or displaced – in each individual case. To the extent that nosology formed a bird's-eye view of the various categories of disease and their general internal relations of ordination and subordination in atemporal and universally applicable tables, insight into the integral placement of diseases within the order of nature and of things had been rendered possible. Quoting Sydenham, Boissier de Sauvages was able to emphasise the following point, that he who "carefully observed the order, time, hour of the beginning of the three day fever, together with the attendant chills and sweats, in short all its distinguishing features, will have just as many grounds to believe that that illness is a species of disease as one has of believing that a plant belongs to a species because it always grows, blooms and dies in the same way" (Foucault 1990: 5/ Foucault 1997: 7).

In classificatory medicine, the general still featured as the legitimate object of knowledge. The general was what could actually be known. Individual cases were known only in relation to the general; they appeared as non-general particulars that could be subsumed under a general concept, and allowed only of a positive determination to the extent that they could be thus subsumed.[3] They could only distinguish themselves from these

concepts in a negative sense. Knowledge of particular instances was only possible in classificatory medical science to the extent that all instances were first and foremost considered as instances of something universal. Knowledge of the sick individual was therefore in principle unattainable. The sick individual had to be perceived as a particular instance that could be understood only to the extent that it could be dissolved in the general.

All this changed with the arrival of a new pathology. With the arrival of a new pathological anatomy and physiology it became possible to penetrate into the sick individual and form a new kind of knowledge that distinguished itself from former kinds of knowledge in the sense that the individual no longer had to consider him or herself as 'particular'. From Bichat through Laënnec and up to Broussais, pathology increasingly penetrated the individual, which was, indeed, a spatio-temporal entity unique in relation to its environment and all other individuals, but which existed or reiterated itself across space and time, and was always identical with itself. In the course of this development, the unique, particular disease that the patient suffered from emerged as something identifiable in space and time without yet being reducible to them. With the arrival of the anatomo-physiological clinic a new science of the individual became both possible and necessary. It was a science that no longer related the individual to something universal, but observed how the individual was affected by unique states and events. A discourse on the individual that related to it in the singular became possible. From this point forward, diseases ceased to be universal and became individual. Disease became the event and process that assumed the form of individuality.[4]

According to Foucault, the anatomo-physiological clinic marks modern medicine's decisive break with an assumption that had remained unchallenged since the Platonic and Aristotelian philosophies of classical Greece: the assumption that it was only possible to achieve knowledge of the individual as something general; that it was impossible

to achieve knowledge of the individual without, at the same time, annulling its individuality in an understanding of it as something particular. Foucault's formulation of the problem here is doubtless polemical. There was never a decree forbidding the pursuit of knowledge of the individual – or of the singular for that matter – in the history of philosophy from Plato and Aristotle or up to the natural history of the modern epoch as such. The problem was that it was not thought possible to say anything about the individual, and also impossible, therefore, to know anything about it without employing general terms that annulled its individuality.[5] In so far as it was possible to obtain knowledge of the individual or the singular as something universal, it was only possible to understand it as something in a sense deficient, as something dissociated from the universal.

A New Organism, New Life, and a New Conception of Disease

As I have already implied, the individual that evolved as a living being affected by unique instances of disease was not a static being. It was an active force, realising itself by passing through a range of various processes, locked into a constant reciprocal relation to an environment that affected its ability to function in different respects. The sick individual had become a living organism that interacted with and related to a unique, mutable, natural and social milieu. It had become an organism that stood in certain relations to other organisms and other instances of disease, together with which it formed a series.[6]

The pathologists of the era thus experienced an intimacy with another of the epoch's leading sciences: physiology. One of Broussais' closest students, Bégin, could thus draw attention to the fact that "Pathology is merely a branch, a consequence of, a complement to physiology, or rather, physiology embraces the study of life processes (l'etude des actions vitales) at all stages of the existence of the living body. Without noticing, we pass from one to the other of these sciences as we examine functions from the moment the organs are

performing with all the regularity and uniformity of which they are capable, to the point when the lesions are so serious that all functions become impossible and all movement stops. Physiology and pathology mutually illuminate one another." (Bégin 1828 I: xix/ Canguilhem 1991a: 25/ Canguilhem 1991b: 56). Physiology studied the functions of living organisms in general and also, therefore, their healthy function. Where physiology was concerned with human beings, it studied the vital activities of healthy humans. A physiology of this character had evolved as an all embracing super science parallel to, and intimately bound up with, pathology and medicine.

With pathology and modernity, therefore, a new notion of life emerged, which was not present in classificatory medicine. This conception of life took centre stage, substituting the role that nature had taken within nosology. "It was the inexhaustible, but closed basis in which disease finds the ordered resources of its disorders" (Foucault 1997: 153).

Shortly afterwards, in *The Order of Things*, Foucault described how the notion of life as a thoroughgoing unifying force evolved within the field of natural history. Traditionally, natural history had started its enquiries with visible and timeless forms in a bid to order individual creatures into species and genre, naming them with the aim of producing an all-embracing nomenclature of nature. This method was demonstrated in the Linnean system of nomenclature, established in the mid 1700s, and monumentally expressed in Carl von Linné's *Systema natura*, which was published in 1735.

Foucault elucidates the sea-change in natural history at the end of the 18th century. Scientists like A.L. de Jussieu began to stress that nature's forms bore a relation to their function. A little later, with his *Leçons d'anatomie compareé* (*Lessons on Comparative Anatomy*), Cuvier elaborated the principle of "the correlations of parts" (Cuvier 1805).

According to this principle the anatomical structure of every organ is functionally related to the organs in the body of an animal, and the functional and structural characteristics of organs result from their interaction with the environment. In contrast to É. Saint-Hilaire, who held the theory that anatomical structure preceded and made necessary a particular mode of life, the functions of an animal determine its anatomical form.

A notion of an outer order that we read into and see reflected in natural history rests on the inner organisation of the world we seek to comprehend. Thus a concept of nature as an aggregate of organisms was beginning to emerge. Nature appeared as it did, and was possessed of certain forms, because they had a certain function. Nature was thus arranged according to these functions.

In the final analysis, these developments suggested that life itself was an all-embracing dynamic, responsible for the function of everything in nature; and a foundation that intimated itself in the individual life-pattern of each living being. It became the principle according to which organisms were formed, entered into reciprocal relations and perished.

Natural history had studied life forms, but had studied them as classifiable entities having the property of existence. The object of study had now become the logic of life forms, which also employed classificatory methods. There was a shift from the taxonomic conception of life – from the idea of life within the closed universe of taxonomy – to a synthetic idea of life as a dynamic force running through all living beings and binding them together.[7]

In this sense, then, our conception of life had become ‘dynamic’. Nature was no longer considered a closed, homogenous system, but something that transformed and developed. Steps were being taken to develop a new science of nature that considered nature

as an expression of the life principle pervading it.[8] This was indicated by the use of the term "biology" to describe a new science of nature at the beginning of the 19th century.[9]

The elaboration of nature as a dynamic system made it amenable to historical interpretation – in the modern sense of the word historical that is – which was to become a central theoretical assumption in Darwin's theory of evolution.

Thus we can trace a movement from the conception of nature and the order of things from the schematic tables of nosology and classical natural science down through pathology, physiology and biology to a conception of life developing through the organisms of nature.[10] Within the context of this dynamic and this history, life came to expression as an obscure force; as an impulse that contradicted permanence and, therefore, the very being that had traditionally constituted the foundation of philosophy. Life had at once become a being and a non-being. It had become the rationale of all finite forms of existence; their genesis, their sustenance, their decomposition and their extinction. It simultaneously revealed and withdrew its presence in a double movement. It had become the insubstantial substrate in a state of continual withdrawal; constantly receding as we penetrated deeper into nature in order to grasp it.

The intimate relationship between disease and life marked by pathology as a discipline that conceived of itself as a sister science to physiology, also implied a change in the conception of disease.

In the classical nosology of Sydenham and Sauvages, disease had primarily been conceived of as a 'being'.[11] But not with Broussais; her disease was to be understood as a particular organic reaction caused by an irritant. Disease was not a particular that reflected a universal being; it was a specific pathological reaction. The close relationship between disease and the dynamic of life meant that disease could be understood as a pathological form of the

realisation of life, or as life's pathological form. Disease became another form that life could assume. The sick person was someone who lived another kind of life, but still a life all the same; the life of the suffering patient. Disease was no longer a being possessed of being, rather it appeared as suffering.[12]

Thus pathology had to understand disease as something relative. Disease as pathology described it, was a deviance in function. Pathology studied how the organism deviated to a greater or lesser degree from the normal functional patterns described by physiology. Disease was to be studied within the context of the contradiction between the normal and the pathological, with the implication that disease had to understood as anomalous.[13] Where in pathology it was possible to study life in its negative or deviant form, in physiology it was apparently possible to study it in its normal functional state. Thus pathology and physiology were brought into an intimate relation with one another which, at the same time, kept them separate.

III. Wider Implications of the transition

Another Form of Normativity and Health

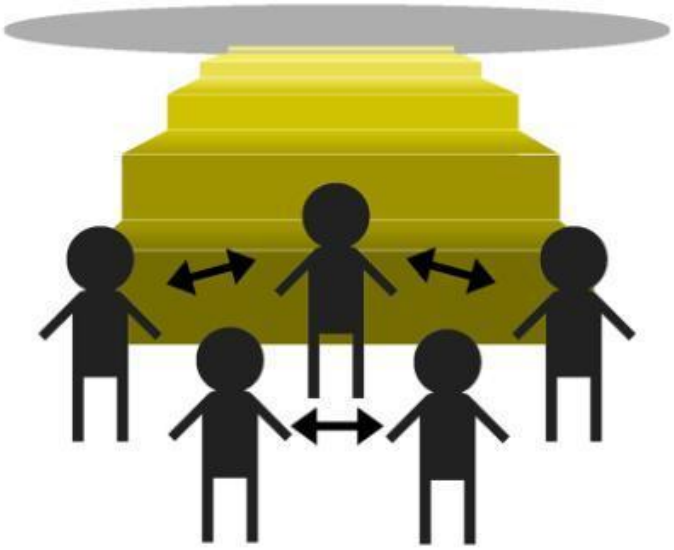
With the contradiction between the normal and the pathological, a scientific objectivity free of all value judgement had apparently been established, at least, to the extent that normality can be understood in a descriptive, static sense as the 'average' or 'most frequent' mode of function. As Canguilhem seeks to establish in his work *The Normal and the Pathological*, however, value judgement cannot be circumvented in this way.

Canguilhem makes the epistemological point that the positivistic conception of the relation between physiology and pathology, which states that physiology ought to inform

pathology in order to facilitate therapy[14], is – in the context of actual knowledge - reversed. Aristotle had already been aware of the fact that the well-spring of science is amazement or surprise. It is the problematic, and not the unproblematic, that constitutes the basis of scientific inquiry. The impetus to medicine is provided by our sense of being deprived of something essential in life rather than a sense of suffering or feeling untoward. Thus therapy and therapeutic techniques have been the guiding stars of medicine. An examination of the genesis of medical science clearly demonstrates that positive knowledge issues from the consciousness of a fundamental lack; from something negative, a privation that has to be confronted and annulled.

Canguilhem contests that this continues to constitute the condition of the possibility of science in its developed state. That people have a direct and concrete feeling of suffering – a pathos – and a consciousness of what it is to be ill, or that they experience a sense of lack, makes pathology and medicine possible. Without this feeling and consciousness of lack there would be no positive science (Canguilhem 1991a: 52-56/ Canguilhem 1991b: 91-97). According to Canguilhem, this is also apparent in the fact that the normal can never be grasped immediately or directly. It makes its presence felt indirectly as that which concrete instances are divided in relation to and from which they deviate to different degrees. The biologically normal appears only in terms of deviations (Canguilhem 1991a: 72/ Canguilhem 1991b: 118) . On closer examination, thus, the normal in pathology cannot be reduced to a mere descriptive term. Normal function appears to function as a norm and implies, therefore, a normative meaning. For contemporary medicine, healing means restoring the functional mode of a function or organism, that is, to the norm from which it has deviated (Canguilhem 1991a: 75/ Canguilhem 1991b: 122-23) .

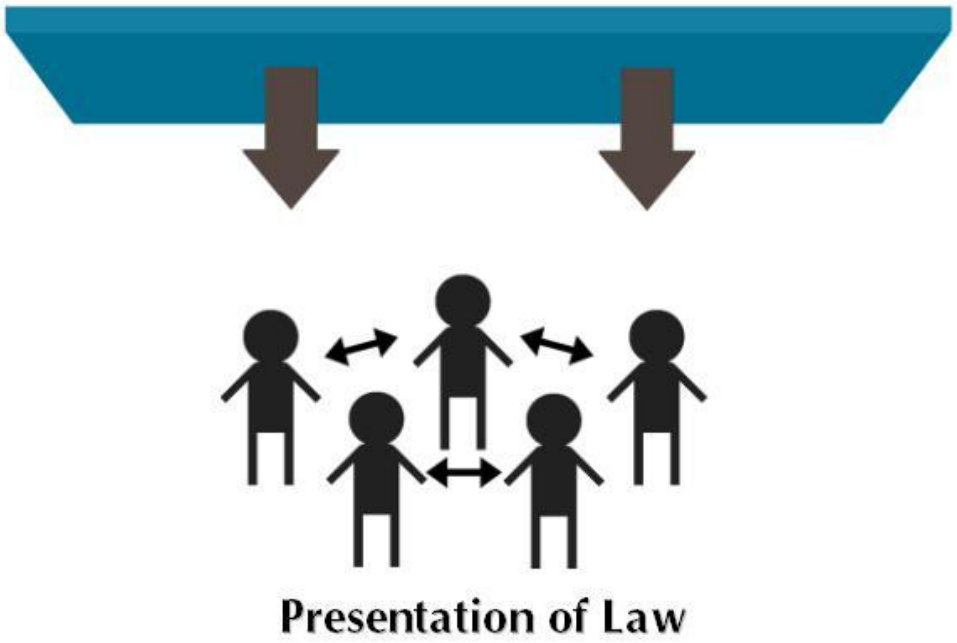
The modern sense of the word “norm” is synonymous with the idea of a guiding thread, or rule, for the conduct of a given population. A norm provides a common measure (or gauge) which is not necessarily incarnated or instantiated, but which each instance stands in relation to. The norm provides the means of judging and estimating concrete examples of conduct, in order to praise them or to blame them to varying degrees, all on the basis of their relative distance to the given norm. A norm is thus an appended common measure towards which we continually advance, and under which we are already in the process of being integrated. It has, therefore, a moralising and integrating effect on the area it relates to, and in the evaluation of which it is invoked.



Regulative norm

With the introduction of the norm a new form of normativity emerges in the field of medical science. With nosology, this normativity possessed the character of law. In the field of the

study of species of diseases, the object of inquiry had been subjected to fundamental universal forms or laws. These applied as general commands that things known already obeyed. Indeed, they were already inherently present in it, as they applied across space and time and could be represented by science.



With the appearance of the norm in pathology, a form of normativity emerged that did not intimate itself ideally in immediate form, but appeared in a mediated form as the appended goal that the organism approaches, but fails to realise through its own activity. With the help of this measure, the individual organism is brought into relation with similar individuals, in relation to whom it becomes integrated, thus achieving sociality.[15]

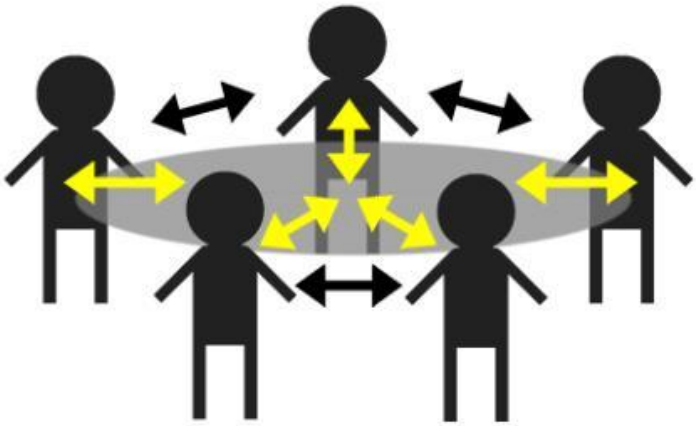
As modern medicine is a repository of experience pertaining to the sick individual and which relates this individual to a qualitatively better mode of function, i.e. to a

norm or to a model, it is a field possessed of its own inherent normativity. Medicine bears within itself its own regulation of the given and its own idealising tendency.[16]

With the pathological inquiry, therefore, there is talk of simultaneous physical, social and moral recognition. With the arrival of pathology, medicine found itself in a field in which the concern with the solid, well functioning physical-organic development of the individual stands in an indissoluble connection to the patient work of creating a fertile and prosperous population and a well ordered nation (Foucault 1990: 35 Foucault: 1997: 35). Medicine had become a recognition of the natural social individual as something that could be ameliorated and integrated.[17]

That the perspective heralded with the arrival of normality and the norm was in principle infinite becomes clear when we, following Canguilhem, become attentive to the fact that the organism that emerged in the field of medical science stands in a constant reciprocal relation to its environment. The normal level of function that intimates itself here, taking on - as it does - the character of a norm that the sick individual can approach, by no means provides any form of closure. That which appears normal is, in the final analysis, simply to be understood as the response to a given environment that is best adapted to that environment, and which is – in the concrete survey – bracketed off or left out of the equation.

This means that one has to go beyond the body of the individual to establish what is pathological, normal and normative for it. This in turn means that at a deeper level, the normal as a functioning norm has to be perceived as the result of norm-establishing activity on the part of the organism in an environment which is - for its part - in a state of constant flux. This has to be conceived of, therefore, along the lines of a provisional contract.



As Canguilhem states: “If we cannot speak of normal man as determined by the physiologist, it is because normative men exist for whom it is normal to break norms and install new ones” (Canguilhem 1991a: 107/ Canguilhem 1991b: 164-65) .

This is borne out by the emergent notion of health. To be healthy is to be more than just normal. By health, we understand not just simply the ability to be normal in a given situation, but also the ability to tolerate changes in a given environment and given normality, to the extent that one is able to install new norms in new situations (Canguilhem 1991a: 130/ Canguilhem 1991b: 196-97).

In this sense, a more implicit organism emerges, living in a continuous ‘Auseninandersetzung’ with an environment that provides it with challenges to which it must respond through the transcendent activity of norm-setting. A life, too, emerges which, as of yet, has not developed to its full potential, but which – when it is challenged and when

necessary – is able to transcend its own immediate abilities. It is life as life-expression, constantly capable of establishing values and norms. And at this level, a third form of normativity appears: that of continuous normativity.

Seen from this perspective, sickness has to be thought of as the lack of an ability to respond to the challenges that the environment exposes the organism to. The hallmark of sickness is that it reduces the organism's threshold of tolerance to environmental changes and draining it of energy. Disease reduces the biological vitality of the organism and its ability to cope with other diseases.

In contrast, it must be said that the healthy organism distinguishes itself by responding to the challenge posed by a given disease and restoring itself to health; thus securing for itself the potential for further development. The sick person thus becomes an integral part of life; perpetuating life, forcing it to come to further expression.

A New Form of Existence

It is therefore entirely impossible to establish a science of life without the possibility of anomaly, because disease, death and failure are all essential constituents of its object.

The individual that emerged in its singularity as the seat of disease through the work of Bichat and Broussais first appeared as an object of study for medical science when determined as an organism exposed to continual attack and vulnerable to concrete, demonstrable inner dangers. The human individual that emerged as the object of medical knowledge was a finite being that, at every turn and stage of its development, was inscribed with its own ubiquitous decomposition and death. Only when the human individual was conceived of in inherent relation to its own destruction, was it possible to determine what it actually was. Anatomo-physiological medicine subjected the individual body to an

examination that inquisitively sought to penetrate it in order to discover its secret lesions, but which also established an optic that, with a disinterested interest, contemplated the life of the individual as a living being in a constant precarious relation to its approaching death. A death, eternally present in the midst of human life in the form of an inherent personal corruption that had to be held at bay, became an organisational principle of modern medicine, and the sum of unique objects that it turned its attentions to.

The form of existence this opened up is perhaps best illustrated by seeing it in relation to the art of the era, and its representation of relations between life, death and existence. In the universes of the renaissance and of classicism, death appeared as the general determining boundary of existence, a nothingness, the great leveller of status and circumstance.[18] From this point forward, death began to feature not so much as the leveller of all circumstance and individuality, but as that which became constitutive of the individuality of the individual, endowing existence with its unique qualities. First in relation to one's personal death, a death the individual bore within him and which was constantly approaching, was the individual able to emerge from the shadow of its levelling effects and become himself.[19]

As long as death was perceived in terms of the macabre, it featured as a common outer threshold, and life, mirrored in sickness and death, was merely a common dance on the edge of the grave. The morbid, by contrast, expressed a sense of how life realised its most specific and diverse forms when it mirrored itself in death. The integration of death into life meant life could no longer appear as a coherent, compact continuum, and instead began to appear as an episodic, fitful phenomenon. Through the morbid, however, and in the shape of a lack of something coveted, a response began to form and achieve a unique and widespread foothold.

The sense in which the individual relation to mortal illness, to the sickness unto death, managed to press life into manifold forms of sentimentality can be clearly observed in the arts. The many forms and faces of death became an obsession for painters such as Goya, Géricault and Delacroix. From Goethe's *Die Leiden des jungen Werther* to Chateaubriand's *René*, from Flaubert's *Madame Bovary* and *La Tentation de saint Antoine* and the life and works of Poe and Beaudelaire to Zola's *La bête humaine* and Apollinaire's *Alcools*, modern literature can be interpreted as the narrative of the mutual interpenetration of life and death, of the fragile permanence of a moribund individuality with an erotic polymorphism.[20]

In all these works a new complexity in the relation of the individual to death was expressed in a life that enunciated itself as an unfulfilled urge, an unredeemed longing. A new experience of an inner-life tinged with and threatened by disease, death and decay later took shape in the new, detached, absorbed mode of knowledge represented in psychoanalysis, with its focus on the hysteric, his neurosis and his death-orientated and, in the final analysis, in-death-incorporated sexual drive. Where the hysteric represented morbidity on the psychological level, tuberculosis became its representative on the somatic level, as the archetype of an existence that constantly bore within it the traces of a terrible and bloody fatality. Rarely has the unique passion characteristic of the morbidity of modern individuality been orchestrated so flawlessly as it has been in Thomas Mann's *Der Zauberberg (The Magic Mountain).* Here, a morbidly febrile existence was able to rob each – and even the seemingly most insignificant - event of an infinite selection of 'implicit' meanings and limitless perspectives, only to create a discontinuous, superabundant universe in its place; a universe that, in the final instance, proves to reiterate the same tale of a sickness unto death.

Thus in literature, the insurmountable tragedy of the relation of man to a world mightier and greater than himself won a new form of lyrical recognition. Hitherto, in epic drama, this

insurmountable tragedy had been chiefly rendered in terms of its violence. In Elizabethan tragedy, human limitation became the extrinsic dynamic dialectical challenge man had to grapple with. In the conflict with something infinitely greater than himself, however, insubordinate man was always doomed to fail. Nevertheless, the conflict always intimated a resolution that could integrate man into a higher order, be it social or natural. When, quite out of keeping with his time, Racine, in his neo-classical tragedy, brought the limitations and independence of man into sharp focus and relief, he made human finitude a central theme in a universe that was raised on the touchstone of a clear and irreconcilable schism between the given and the hidden. Thus finitude was marked by the suggestion that what is experienced in the given world by no means constitutes the world in its entirety, and that certain obscure forces that resist analysis in the light of day remain hidden to pose a continual threat to the world of positive experience. A sense of human limitation thus revealed itself fleetingly as a feeling of resistance to the positively given world of human experience, and the sense that there was something beyond the sphere of human experience that did not allow of articulation. Consequently, human life took on the character of a form of hubris. This was experienced as an unavoidable basic existential condition that had to be taken on board in a conscious act of amnesia, in a life of defiance that constantly and restlessly sought to clarify its own foundation, but would never arrive at the goal of its strivings. In the figure of Hans Castorp, the passive, resigned, introverted, "feminine" acceptance of human limitation reached its peak. With a bittersweet fascination, Mann passionately re-baptised the human individual and celebrated in manifold ways the fact that the human individual bears a secret in his innermost core, a secret that was first revealed and then concealed; the secret of a personal sickness, suffering and final expiration. With Castorp and *The Magic Mountain,* existence has become 'tuberculous'.

IV. Medicine and Modernity

Thus with the birth of pathology, a disease emerged that insinuated itself as part of life. The disease itself could be *understood* as a part of life; namely the pathological life form. As a result, not just the disease, but death itself could be seen to be a part of life and existence. Death was no longer something extraneous to life that with its occurrence put an end to life. Together with life, death emerged as both constitutive of, and destructive to, life.

This meant that death began to appear as an integral and eliminable aspect of life. In its mode of function, each existence pointed towards its own internal truth, that it was suffused with life and therefore incorporated its own death. This truth was made manifest in every illness. The possibility made its presence felt in each and every occurrence of sickness. "It is not because he falls ill that man dies; fundamentally, it is because he may die that man may fall ill" (Foucault 1990: 158/ Foucault 1997: 155). If disease became part of life with the emergence of pathology, then existence and the expression of life become fundamentally pathological. From the outset, life and existence point towards their own decay, in the face of which they continually have to rally and minister to themselves. There is no existence, no life, without therapy and continual medical treatment.

In this way, medicine insinuates itself as part of modernity and the modern project. Modernity usually appears as a program which presents us with the task of its completion in order for us to become truly autonomous and enlightened beings in control of our own lives. However, it might be that modernity, from the outset and in essence was and will continue to be an uncompleted and unfinishable project. Modernity represents a project which is inherently abortive and deviates from its apparent intentionality.

But this has not led us to abandon the project. On the contrary, it has meant that we have continually resumed it in order to reintegrate or re-assimilate that which seems to elude it. From the beginning, the abortive nature of the project was one of its integral and inherent features, serving, at the same time, as an invitation to its continuation. By virture of its abortive nature, modernity continually calls for more of itself. It requires more – not of the total repetition, not of the very same - but of the similar.

In so far as medicine is an attempt to expunge disease and death in order to create progress and promote well-being, medicine and pathology have to be taken as integrated aspects of the modern project; a project doomed to failure because of the inevitablity of the sickness and death they seek to hold at bay, but moreover because sickness and death have become an integral part of life itself. The impossibility of the task of preventing the assault on welfare does not, however, hinder us in our activity. It leads only to a redoubling of our efforts to integrate it into - and annul it through - life. In this sense, medicine and pathological life are possessed of a tendency for infinite growth.

Literature

Bacon, F. (1994): *The Advancement of Learning*, Kessinger Publishing Company, London.

Bégin, L.-J. (1828): *Traité de physiologie pathologique, rédigé suivant les principes de la nouvelle doctrine médicale*, Tome I-II, Méquignon-Marvis, Paris.

Bernard, C. (1966): Introduction à l'étude de la médicine experimentale, Garnier-Flammarion, Paris.

Bichat, M.F.X (1800): *Traité des membranes en général et de diverses membranes en particulier*, AVIII 1800, Méquignon-Marvis, Paris.

Bichat, M.F.X (1801): *Anatomie générale, appliquée à la physiologie et à la médecine*, Brosson et Gabon, Paris.

Bichat, M.F.X. (1802): *Recherches physiologiques sur la vie et la mort*, Brosson et Gabon, Paris.

Boissier de Sauvages, F. (1772): *Nosologie méthodique, dans laquelle les maladies sont rangés par classes, suivant le systeme de Sydenham, & l'ordre des Botanistes*, Hérissant, Paris.

Broussais, F. (1821): *Examen des doctrines médicales et des systèmes de nosologie, tome 1-2*, Paris

Canguilhem, G. (1987): "La décadence de l'idée de Progrès", in *Revue de metaphysique et de morale 92,* Vrin, Paris.

Canguilhem, G. (1991a): *Le normal et le pathologique*, Presses Universitaires de France, Paris.

Canguilhem, G. (1991b): *The Normal and the Pathological*, Zone Books, New York.

Canguilhem, G. (1992): "Ouverture" in Roudinesco, in É. (ed.) (1992): *Penser la folie. Essais sur Michel Foucault*, Èditions Galilée, Paris, pp. 39-42.

Cullen W. (1802): *First Lines of the Practise of Physic*, Reid & Scott, Edinburgh.

Cuvier, G. (1817): *Le règne animal distribué d'apres son organisation, pour server de base à l'histoire naturelle des animaux et d'introduction à l'anatomie compare,* 4 bd., av. Figures, dessinées d'après nature, Paris.

Cuvier, G. L. C. F. D. (1805): *Leçons d'anatomie comparée. Tome 1-5,* Dumeril/Duvernoy, Paris.

Cuvier, G. (1835): *Cours d'anatomie pathologique*, Dumeril, Paris.

Foucault, M. (1984): "Du pouvoir", in *L'Express No. 1722, 6-17.7.89*, pp. 56-58.

Foucault, M. (1988): "Histoire de la médicalisation" in *Hermes 2,* Paris, Ed. du CNRS, pp. 13-29.

Foucault, M.(1994): *Dits et écrits III*, Gallimard, Paris.

Foucault, M. (1972): *Histoire de la folie*, Gallimard, Paris.

Foucault, M. (1990): *Naissance de la clinique*, Presses Universitaires de France, Paris.

Foucault, M. (1990): *Les mots et les choses: une archéologie des sciences humaines*, Gallimard, Paris.

Foucault, M. (1997): *The Birth of the Clinic*, Routledge, London.

Hegel G.W.F. ([1832] 1988): *Phänomenologie des Geistes*, F. Meiner Verlag, Berlin.

Heidegger M. ([1927] 1993): *Sein und Zeit*, Max Niemeyer, Tübingen.

Jussieu, A.L. de (1789): *Genera plantarum secundum ordines naturales disposita: muxta methodum in horto regio Rarisiensi exaratam*, Paris.

Kant, I. (1978a): *Kritik der Urteilskraft,* in Kant, I.: *Werkausgabe Band X,* Suhrkamp Verlag, Frankfurt am Main.

Kant, I. (1978b): "Was ist Aufklärung", in Kant, I.: *Werkausgabe Band XI,* Suhrkamp Verlag, Frankfurt am Main, pp. 53-61.

Kant, I. (1978c): "Der Streit der Fakultäten", in Kant, I.: *Werkausgabe Band XI,* Frankfurt am Main, Suhrkamp Verlag, pp. 262-393.

Laënnec, R.T.H. (1819): *De l'auscultation mediate ou Traité du diagnostic des maladies des poumons et du coeur, fondé principalement sur ce nouveau moyen d'exploration*, Brosson et Chaudé, Paris.

Leibniz, G. W. (1903): „Table de définitions", *Opuscules et fragments inédits de Leibniz. Extraits des manuscrits de la Bibliothèque royale de Hanovre par Louis Couturat*, F. Alcan, Paris.

Linné, C. von (1756): *Systema naturæ sive regna tria naturæ systematice proposita per classes, ordines, genera et species*, Editio [9.], multo auctior et emendatior.

Mittelstrass, J. (1980): *Enzyklopädie Philosophie und Wissenschaftstheorie*, B.I.-Wissenschaftsverlag, Mannheim/Wien/Zürich.

Morgagni, B. (1761): *De sedibus, et causis morborum per anatomen indagatis libri quinque*, Tomus 1: Duos priores continens libros, Venetiis.

Saint-Hilaire, E. G. (1824): *Système dentaire des mammifieres et des oiseaux*, Crevot, Paris.

Schelling, F.W.J. (1799): "Einleitung zu dem Entwurf eines Systems der Naturphilosophie", in *Schriften von 1799-1801*, Unverändr. reprogr. Nachdr. (1975), Wissenschaftliche Buchgesellschaft, Darmstadt.

Virchow, R. (1966 [1858]): *Die Cellularpathologie in ihrer Begründung auf physiologischeund pathologische Gewebelehre*, Olms, Berlin.

[1] The late Foucault returned to the history of medicine. Notable are ”Crise de la médecine ou crise de l’antimédecine?” (Foucault 1994: 40-58), “La naissance de la medicine sociale” (Foucault 1994: 207-28), ”L’incorporation de l’hôpital dans la technologie moderne” (Foucault 1994: 508-21), ”La politique de la santé au xviii[e] siécle” (Foucault 1994c: 725-42).

[2] “Since 1816, the doctor’s eye has been able to confront a sick organism. The historical and concrete a priori of the modern medical gaze was finally constituted” (Foucault 1990: 197/ Foucault 1997: 192). It is worth noting, however, that the a priori conditions that Foucault attempts to elaborate do not, in contrast to the Kantian conditions, establish the foundation of the possibility of experience in general and the conditions of all appearance. They have evolved historically, and are thus to be considered as a reconstruction of conditions of specific, limited, historic forms of experience that can exist side by side with other forms of experience.

[3] The term “Man” refers, for example, to the commonwealth (or universal community) that unites all men into a single species. In contrast, the term “a man” – or “a human being” refers to a specific being, but only in so far as it is conceived of as belonging to the species “Man” or “Humankind”.

[4] The individual ”Socrates” is not immediately singular in the strictest sense of the word. Socrates is an identity that is protracted in time and extended in space. An individual is unique in relation to his environment and other individuals, but not in relation to himself. The individual ‘recapitulates’ itself. ”Socrates” refers to nothing absolutely unique or that does not allow of recapitulation. The singular describes something unique; that is, something unusual and novel that represents an exception in relation to the sum. Thus it stands in contradistinction to the regular, the common or the universal. The singular describes that which distinguishes itself as unrepeatable.

[5] By “individuum”, tradition understood a being that could not be distinguished from other beings belonging to the last of all determinable sub-species. In this sense, the term “Socrates” would refer to an individual distinct from other particular men (as the term “man” refers to each and every member of the class of things “men”) without necessarily being able to provide a general determination of the essential difference thereby; meaning that Socrates appeared as a unique individual in relation to the class of things designated “men.” In his ”Table de définitions. Opuscules et frg. Inéd.” (hg. L Coutrat (1903), p. 498) Leibniz defined the individual thus: ”Individua ejusdem speciei infimae sunt, quae non possunt per essentialia distingui (Individuen derselben untersten Art sind solche, die durch Wesensbestimmungen nicht unterschieden werden können.)“.

[6] The development described in this paper suggests and anticipates, therefore, central aspects of social medicine that first gathered pace in the 19th century. Social medicine considered and treated instances of disease as serial phenomena that could be treated by adjusting the natural social environment of the living human individual.

[7] In the *Kritik der Urteilskraft (Critique of Judgment)* Kant was able to postulate that an organised being was no mere machine: „Machine: den die hat lediglich *bewegende* Kraft; sondern es besitzt in sich *bildende* Kraft (…), welche durch das Bewegungsvermögen allein (den Mechanism) nicht erklärt werden kann“ (§ 65).

[8] The term ‘biology’ quite probably made its first appearance in K.F. Burdach’s *Propädeutik zum Studium der gesammelten Heiklunst,* which was published in 1800. The word won favour and entered into common parlance after Comte included the science in his “system of positive philosophy” (Mittelstrass 1980: 315).

[9] According to Foucault, the appearance of biology as science meant that ”the individual was not so much defined as a potential for growth within a certain given form, but determined as a form capable of maintaining itself under certain conditions, and whose annihilation was no longer merely a dissapearance, but a death (according to a process which itself belongs to the biological order of things)” (Foucault 1994b: 64).

[10] In the contemporary natural philosophy of the age, which achieved its most serious breakthrough in the transition from the 18th to the 19th centuries, nature was basically conceived of as “productivity”, and hence

"the unfolding of the life principle". This is made explicit when Schelling states that natural philosophy is concerned with nature as "natura naturans" or the creative subject, and not created nature (Schelling 1972: 720).

[11] The placement of disease could be problematic, as it was a special form of being that destabilised, or challenged, the natural order of things. On the one hand, and in so far as it indicated its own intrinsic order, disease was natural; on the other hand, however, it was unnatural, because it undermined the natural order (Foucault 1990: 158/ Foucault 1997: 155).

[12] A pathological mode of function of this character was best treated by identifying the source of irritation that had caused the reaction, thereby removing both cause and effects.

[13] For Broussais the terms "pathological" and "abnormal" were synonymous. Both terms referred to too high or too low an activity, regardless of whether this activity was mental or physiological (Canguilhem 1991a: 24/ Canguilhem 1991b: 55). Foucault draws attention to how it was that medicine came to be organised around this bipolarity. In the 18th century, to a certain extent, the relation between the normal and the pathological superseded the relation between health and strength as the relation of primary importance in classical medicine. A relation of strength and health had to be re-established and developed through a dietetic that the subject administered to himself after initial advice and prescription (Foucault 1990: 35/ Foucault 1997: 35).

[14] This positivist approach is an expression of the idea that knowledge is a precondition for action; that technology has to be derived from, and to be identical with the application of, knowledge (Canguilhem 1991a: 58/ Canguilhem 1991b: 99).

[15] From the beginning of the 19th century, the term "norm" began to be employed more frequently. It was at this point, too, that the term took on its modern meaning. A diffusion and transformation of the concept "norm" took place, with the consequence that "norm" has today become one of the most basic and frequently used terms in the human and social sciences. From the 19th century onwards, the "norm" and the problem of integration became paramount.

[16] This immanent trait became more pronounced in time with the inception of a medical (or medically improved) normality. By virtue of a range of diverse individual and socio-medical programmes, the public's state of health has improved over the past 200 years. Currently, a medically improved normality is most clearly manifest in both its front and its flip side in the world of sport.

[17] In his thesis *Madness and Civilization*, Foucault had, prior to *The Birth of the Clinic*, elaborated the manner in which a moralising integration with normality as the norm also became crucial in psychiatric medicine around the same time (Foucault 1972: 363-557).

[18] Death had the character of a nothingness understood as a "terme extérieur et final, à la fois menace et conclusion" (Foucault 1972: 27).

[19] This became apparent in philosophy from *Die Phänomenologie des Geistes (Phenomenology of Spirit)* to *Sein und Zeit (Being and Time).* Here, a confrontation with temporality - the finite existence effected by an ever-present death – manifested itself as a fundamental dimension to experience, and which was thus considered to be the precondition for the reflexive consciousness of the finite being in general.

[20] The modern *Bildungsroman*, which appeared with the transition to the 19th century, integrated life and death to the extent that it continually sought to abolish the antagonism between them, resulting in their reformulation at still higher levels. In this process, the individual recognised itself and, ideally speaking, would thus assume its true identity. At the same time, the novel was established as a narration of the eternal quest of the individual to seek out and transcend its own bounds, only to be cast back on itself and its own passionate fervour. These two tendencies are often so interwoven and interdependent that they often appear in the same novel.