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Normality and Normativity

On the Vital and Social norms in the Works of Canguilhem and Foucault

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Normality and Normativity

On the Vital and Social norms in the Works of George Canguilhem and Michel Foucault

Normalita a normativita

O vitálních a sociálních normách v dílech George Canguilhema a Michela Foucaulta

Annotation:

The thesis *Normality and Normativity* is concerned with the problems of the relation of normal and abnormal. The analysis of the expression 'normal' is the introduction of the topic followed by the demonstration that there are multiple meanings of the normal that do not always coincide. During the description of the aspects of norm and normal the fundamental relations between facts and prescriptions will have to be taken into account. The full meaning of the notion normal will be demonstrated on the basis of its relation to the pathological and healthy. A definition of health presented in this thesis, which takes into consideration the specifics of the normal, is based on the works of George Canguilhem and Kurt Goldstein. The crucial moment is the understanding of disease as a reaction of an organism to the limitation of the milieu. An important factor is the introduction of vital normativity that is intrinsic to the living being. This conception opposes the influential conception which identifies the state of health with certain physiological criteria – standards of health - advocated among others by Claude Bernard. At the end of the thesis we will shortly overview the norms as formative aspect in a society. The sociological view of norms that is significant for the extensive work of Michel Foucault does include some of the ideas developed by Canguilhem. Still, both conceptions differ in a fundamental question concerning the nature of vital and social norms.

Anotace:

Tato diplomová práce, *Normalita a normativita,* se zabývá problematikou vztahu normálního a abnormálního. Východiskem této práce je analýza výrazu ‚normální' a zároveň výklad významů, kterých ‚normální' může nabývat, které ne vždy spadají v jedno. Během výkladu aspektů normy a normálního bude třeba vzít v potaz zásadní rozlišení mezi faktickým a preskriptivním. Úplný význam pojmu normálního bude vysvětlen na základě jeho vztahu k patologickému a zdravému. S odkazem na práce George Canguilhema a Kurta Goldsteina bude představena definice zdraví, která bere v úvahu specifiku normálního. Zásadním momentem je porozumění nemoci jako určité reakci organismu na omezení prostředí. Důležitým faktorem je uvedení vitální normativity, která je živé bytosti vlastní. Tato koncepce se staví proti vlivné koncepci, která identifikuje zdraví s fyziologickými kritérii, kterou hají mimo jiné i Claude Bernard. Závěrem této práce se budeme krátkosti zabývat společenskými normami. Sociologický pohled na fungování norem, který Michel Foucault rozpracoval ve svém rozsáhlém díle zahrnuje některé Canguilhemovy úvahy. Nicméně obě pojetí se odlišují v základní otázce ohledně povahy vitálních a společenských norem.

Keywords:

Normativity, normal, normality, norm, abnormal, pathological, environment, milieu, machine, mechanistic, individuality, organism, medicine, biology, society, sociology, epistemology, French philosophy, vitalism, mechanism, law, power, productivity, subjectivity, disease, health

Klíčová slova:

Normativita, normální, normalita, norma, abnormální, patologické, prostředí, milieu, stroj, mechanistický, individualita, organismus, medicína, biologie, společnost, sociologie, epistemologie, francouzská filosofie, vitalismus, mechanismus, právo, moc, produktivita, subjektivita, nemoc, zdraví

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1. Introduction

The main theme of the paper is to undertake a thorough study of the term normality. The notion of 'the normal' includes other related terms such as 'norm', 'normative', 'normativity' and 'normality' and the understanding of the term 'norm' presupposes the clarification of the role of these related terms in the life of organism.

In the 20th century there were two important authors, both from France, who dedicated a lot of their effort to the enquiries about 'the normal' and 'norms', what they are, how they develop, how they affect the organism, what is their role in the society and how they simultaneously co-develop with the society. Although both authors were interested in the norms, each of them concentrated on a different aspect of 'the normal'. These authors are George Canguilhem, a physician and a philosopher who was a professor at Sorbonne and succeeded Gaston Bachelard as the Director of the Institut d'histoire des sciences, a post he held until the end of his active career, and Michel Foucault, a philosopher and psychologist who is famous for his historical investigations into the origins of social institutions which we consider nowadays as the integral part of the society. Bachelard, Canguilhem and also Foucault were all interested also in epistemology. Frédérick Worms explains that there are two main attitudes regarding epistemology.[1] One is represented by Bergson and Brunschvicg. This approach highlights the difference between the science and our experience (apart from Bergson, it is characteristic for Sartre, Merleau-Ponty, Deleuze). The other approach seeks the connections between the science and experience. This is typical for Bachelard, Canguilhem and Foucault as well. The first approach to the epistemology deals with problems of consciousness, life and metaphysics, the second approach is interested in science from epistemological (Canguilhem) and historical point of view (Foucault). Epistemology is linked with the problems of norms. Epistemology tries to grasp the ideal ways of thinking and so it must be normative. When Gaston Bachelard was the director of the institute, the normative approach to the historiography of science was implemented. Non-evaluative approach (represented by Metzger, Rey and Koyré) was replace by evaluative approach to the history of science represented by Bachelard and later by Canguilhem.

Georges Canguilhem started to pursue the questions concerning norms, normativity, normality when he did his research on 'the normal' and 'the pathological' in his doctoral thesis. Canguilhem follows the line of thought of Kurt Goldstein, a German neurologist and

[1] Worms, Frédéric, „Entre critique et métaphysique: la science chez Bergson et Brunschvicg. In: Wagner, P. (ed), (2002) *Les philosphes et la science*, Paris: Gallimard, p. 404.

psychiatrist, who developed a holistic theory of organism while he studied patients with psychological disorders such as schizophrenia and war trauma. Canguilhem treats the pathological from a similar perspective when he also implicitly promotes the holistic approach to the organism. Canguilhem was crucially influenced by the approach of Goldstein and therefore he, similarly to Goldstein, understood pathological and life phenomena not in isolation as separate entities, but instead, he conceived the vital phenomena which include the pathological as a complex of impulses that influence the organism as a whole and whose effects can be properly studied only from the perspective of the entire organism. Canguilhem followed the thought of Goldstein and proposed such a concept of normality for a living being that considers every living being in connection with its environment as each organism cannot be completely excluded from its surroundings. The way an organism co-exists with the environment is polar and contains potential dynamics. An organism can be treated as a single being only with regard to its environment for only the relation between the organism and its environment can provide us with a full picture of a single being and its current state.

In the issue of norms, Michel Foucault was influenced by the work of George Canguilhem. The questions concerning life and how it is influenced by norms was at the forefront of research of both the authors. Canguilhem published his doctoral thesis *Essay on some Problems Concerning the Normal and the Pathological* in 1943. In 1963 Canguilhem was in charge of publishing Foucault's *Madness and Civilization: A History of Insanity in the Age of Reason*. At the same time Canguilhem prepared his course at Sorbonne about norms as he prepared the revised publication of the *Essay* by adding the *New Reflections on the Normal and the Pathological*. Both texts were published together in 1966 with the title *Normal and Pathological*[2]. It is obvious that both authors knew each other's work and mutually influenced each other through their texts.

Canguilhem initially concentrated on the norms from the perspective of an organism; he is interested in the vital processes with regard to their normative character. His main object of interest are the ways by means of which a living being establishes a stable relationship with its environment through its natural normative capacity. Compared to Canguilhem, the principal interest of Foucault lies in society and social relations. Foucault was inspired by Canguilhem's presentation of self-organizing normative activity that is characteristic for organic life and in his historical excursion, Foucault explains the self-organization of social institutions. However, this should not be understood as a simple extension of Canguilhem's conception of norms.

[2] The years indicate original French editions.

Although, Canguilhem was for Foucault a source of inspiration, the views of both differ in the question of social norms and social normativity. Each of the authors has a slightly different opinion about the continuity of vital and social norms.

As a vantage point of this paper we will highlight the differences between the concept of normality in the sense of the most common occurrence, and in the sense of a formative obligation, as a normative order, which we often follow even unconsciously. We will aim to explain how the norm functions differently in case of living beings compared to mechanical objects and mechanisms. The term 'normal' is adequate for the description of a flawlessly functioning mechanism. Metaphors and analogies from the realm of artificial and mechanical objects are quite regularly employed in attempts to describe the functionalities of the living tissue. This is sometimes very practical and helps to facilitate the understanding. For the living beings, however, there is another concept, that of health, that seems far more relevant regarding the description of the actual state of living beings.

There are multiple ways of describing a person's state of health. The question is deeply connected with the questions of normality. What is healthy for a living being is sometimes interpreted similarly to what is normal for a living being. It is still a common practise to respond to such a question by indicating the physiological state of a person using measurements such as blood pressure, body temperature, pulse rate, blood analysis, etc. Such an approach is typical for positivists who often connect the healthy state of a person with the state in which all the physiological measurements, that serve as 'life indicators', are normal, i.e. statistically within the average. This thought was support by Claude Bernard, a biologist renowned for his influential principles of experimental theory in biology. Although these indicators might show that there is a problem in a body that ought to be treated, they should be always related to the actual behaviour of a treated person or more precisely to the person's actual perceived state of health. It often occurs that someone does not manifest any irregularities according to the measured physiological indicators, however his or her state of health might be seriously limited and this person might feel seriously ill. On the other hand, sometimes people are completely healthy and do not perceive any physical limitations whatsoever, yet according to the physiological indexes their bodies indicate a presence of an illness. Due to these difficulties, Canguilhem opposes positivist concepts and argues that the relation between normality and health is more complicated and should take into account more factors than it does.

Hence the question of normality, i.e. of what it means to be normal for a living being, seems to require a rather complex and dynamic answer. The definitions of normality, which are too simplistic and solely based on the measurable physiological data or any other explicit

measurement, tend to assess someone's presumed normal or pathological state inaccurately. A strict and narrow conception of normality is sometimes accompanied with a strong repression of pathological forces. In case there is only one standard of normality or healthy behaviour, usually all other forms of behaviour are forbidden and outlawed.

Following the thoughts of Canguilhem and Goldstein I will try to emphasize the importance of norms and normativity for an organism. The conception of vital normativity will be in contrast to normality as presented by positivist tendencies. The aim of this thesis is to present a dynamic conception of vital normativity that can replace the rigid criteria of normality typical for positivist thinking. I will also dedicate a chapter to the role of norms in human society. In this part we will frequently return to the works of Michel Foucault for his attempts to describe the important factors of social normativity that evolved as a kind of opposition to the power of law. Foucault aims to demonstrate that social norms are dynamic similarly to vital norms. These efforts explain how norms function in a society and how the society defines itself by these norms. I will expound important features of norms that turn the individuals into subjects of a society and that help them perceive themselves as subjects of a society. These aspects of normativity were analysed by Pierre Macherey in his articles where he explores the work of both Canguilhem and Foucault and their opinions regarding norms and normativity. The purpose of this paper is to present a modern conception of normativity and norms that would surpass older conceptions such as mechanistic and positivist theories of normalcy.

2. The Meaning of 'The Normal'

At first glance, what is normal appears absolutely clear – everyone seems to know what is normal. We see a lot of normal things every day, everyone knows a lot of people who could be called normal in a certain sense. Every one of us knows a few people that could not be called normal. But sometimes we are in doubt and we ask ourselves: Is this normal? How can this be normal? Is it still normal? To answer these questions, we first need to understand the notion of the normal and the norm. The semiotic analysis of the meaning of the word 'normal' will provide us with several diverging meanings of the term 'normal'. We will follow George Canguilhem who firmly differentiated between two different yet related meanings of the terms normal and normality. We will supply one more meaning of the term normal which is implicit in the conception of Canguilhem. I will also shortly draw attention to the famous passage of Hume's *Treatise*, where he highlights the often ignored transition from descriptive to normative. At the end of the chapter we will shortly present two fields of application of norms represented by the normativity of laws and medical norms. Although both these domains belong to the category of the so-called social norms, each of them has its own approach and helps to illustrate the consequences of normativity in a society.

2.1. The Normal, The Norm, The Normative

What do we actually refer to when we state that something is normal? We are making a sweeping statement every day when we make a judgment and say that something is normal while something else is not. How can we be so sure about what is normal and what is not? How can we be so sure about what the concept of normality signifies? The concept of normality and the classification of something as normal, and abnormal, seems for us so natural that we do not feel obliged to explain where this distinction between the normal and abnormal comes from.

The adjective normal can be understand in two ways that seem to be very similar, nevertheless in any discussion about norms and normality their difference must be pointed out, although their point of reference may be identical on multiple occasions. We use the expression normal in many cases to state that something is recognized, based on similarities or indicators, as a representative of a group of similar objects. If we say that this is a normal table, it would probably have a desk and four legs and its height would be approximately one meter. 'Normal' indicates a recognized object as a token or representative of a certain group of similar objects. In these cases, the term 'normal' simply refers to the fact that the single object is, as a representative of certain group, in compliance with what is considered common or regular in

the majority of the represented group. This meaning of 'normal' can be understood as a *majority, representative* or *statistical* meaning. Usually this meaning is understood as descriptive, i.e. that it simply refers to an actual state of the world, without any indication whatsoever whether it is a desired or undesirable state. Normality in this sense would be a factual statement about objects where no information about the value of those objects should be involved.

Next to the statistical meaning of the expression normal and perhaps along with it, there is another meaning that implies a prescription or a restriction. Canguilhem traces the etymology of the word normal.[3] 'Normal' is derived from the term 'norm'. The Latin word *norma* used to denote a special ruler and the meaning of the adjective derived from it was simply 'not leaning right or left'. The ruler *norma* was used to measure other things. This meaning was translated to the word 'norm' which means something that was created with the intention that it should serve as measurement of what is right regarding human behaviour. The meaning of the norm is prescriptive; it has a form of an obligation or commitment. A norm in this sense is a sort of paradigm or scheme that is to be followed or respected. It shows how things of the same kind should be or should act. This understanding of 'the normal' is the *normative* meaning.

After the explicit differentiation of both meanings it is not hard to see why both are often confused and misinterpreted. It regularly occurs that a majority of certain species of organisms have similar behaviour. Let's say that most deer are very shy and try to avoid contact with humans as much as they can. The majority of deer act like this and it is something what they ought to do if they want to survive. Otherwise they would become easy prey or they could be driven over by a car or they could end up being victims of another accident. We can say that it is normal in both meanings of the word for deer to be shy and avoid human contact – a majority of them does it and it is vital and beneficial for them, therefore all deer should act in this way. If we imagine a deer which would be raised by people from a fawn, such a deer would not probably be shy and it would not avoid contact with human beings. Is this deer normal? In the statistical meaning it is obvious that it is not normal. Most of the deer living in the forest would be shy and avoid contact. Is it normal in the normative meaning? That is a more difficult question to answer. Of course this behaviour is not at all typical or fitting for the forest deer, however, all deer raised by humans should be friendly with people and should not be afraid because such behaviour is profitable for them as they are well nurtured and taken care of. So

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[3] Canguilhem, Georges, (1989) *The Normal and the Pathological,* trans. Cohen, Carolyn Fawcett and Robert, New York: Urzone, Inc., (4th reprint, 1998) p. 125.

from this point of view the lack of shyness and friendliness is in this special case normal in the normative sense.

Keeping in mind the difference between both meanings of normal is essential for the discussion. What would happen if we did not differ between them? We would easily lean to identify two things: 1) What happens on regular basis, (i.e. is frequent on the one hand, that is what most people, things and animals do or are part of), 2) What ought to be. The purpose of the differentiation here is to point out that if something happens regularly or is quantitatively represented by many manifestations, it does not necessarily mean that it is what ought to be.

In his work about the normal and the pathological, George Canguilhem expresses the difference between both meanings by stating that the normal 'constitutes an average or a standard of a measurable characteristic'. He is well aware of the ambiguity of the term since it designates 'a fact and at the same time it is also a value attributed to this fact by the speaker'[4]. As we have two different categories, one is plain facticity, brute fact, that could be statistically proven as normal, i.e. average height of a European; the other is a category of assessment, that indicates something that ought to be, something that is here to measure other things of the same kind. Although in many instances an object that is referred to can be called normal in both meanings, it is not true in all instances. For example, we could state that it is normal to do some exercise and a lot of people exercise regularly. This would be true for both perspectives – it is a common activity and it can serve as a standard, a model activity that ought to be pursued. On the other hand, eating processed fast food does not hold true from both perspectives. It is an activity that many people frequently indulge in, but it is not normal in the sense that it is to be pursued, as it can cause serious health problems.

From the examples above it is evident that both meanings of the expression 'normal' are not completely equivalent, although it is quite common that both meaning are valid at the same time. Nevertheless, as Canguilhem points out, both meanings represent a different kind of statement. The statistical meaning is a simple facticity that can be verified relatively easily. The normative meaning, on the other hand, is a statement of value for the speaker. The normative meaning is bound with the speaker and expresses values that are relevant for the speaker regarding the object of the statement. The normative meaning incorporates a moral statement for it expresses a moral judgement of the speaker. By normative statement a speaker implicitly tells what he considers to be right.

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[4] Ibid.

If the statistical meaning of 'the normal' describes facts and factual states, normative meaning uses the concept of norm, i.e. it does not work with the facts, but with their opposite. The opposite of the fact is here the ideal which has a value and cannot be identical to the experienced fact as it would lose its ideal character. This important feature is pointed out by Xavier Roth from the University of Grenoble in his article about norms[5] who adds one more significance of norm to the mentioned two meanings. Norm in this sense is a regular state that conforms best to the given state that is considered natural and a deviation from the regular state is considered abnormal. We could call this meaning the *natural* meaning of normativity. Here, 'natural' refers to the capacity of the normal to signify the natural, although it does not necessarily have to do anything with natural in the sense of related to nature. This meaning of the norm can be applied from the perspective of the individual and also from the perspective of the society. On the individual level, it is a characteristic of biological capacity that varies in the content of the normal among different organisms of the same species. If we take into account, however, the life of a single specimen, the distinction normal/abnormal is cannot be relativized as for the individual the difference between normal and abnormal is obvious. This could be preliminary understood as an expression of biological normativity. On the level of a group of individuals, who together form a society, this distinction has to do with relations of power, and as Foucault showed in his writing about the origins of modern institutions of control, such as educational institutions, prison and clinic, the distinction between normal and abnormal serves as an instrument to differentiate all individuals so that everyone could be classified based on the criteria and consequently treated appropriately in accordance with the distinction normal/abnormal.

The third meaning of ' the normal' is crucial for Canguilhem. This meaning explains how it is possible that the pathological can be at the same time relative and absolute. The pathological and the normal become relative when we take into account multiple individuals. There can be differences between what is normal and pathological for each individual. From this point of view, the boundaries of normal and pathological are relative and vary depending on the individual in question. Nevertheless, from the point of view of a single individual, the difference between normal and pathological is absolute. For a single individual the difference between the normal and pathological is not relative. There is an absolute difference between these states.

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[5] Roth, Xavier, (2016) „Les cinq dimensions fondamentales de la notion de la norme“, *La revue du Financier*, vol. 38, janvier-avril 2016. Available at: https://www.academia.edu/28861102/Les_cinq_dimensions_fondamentales_de_la_norme [Accessed 2 Aug 2017]

The individual can clearly identify the pathological state and from the perspective of the individual the pathological condition is absolute.

2.2. Origins

The confusions stemming from the ambiguity between the normative and statistical meaning of normal statements are regularly encountered even in such areas as science. Canguilhem chooses one example of this confusion from the field of medicine where 'normal' is a habitual state of an organ as well as the ideal state of the organ.[6] Then a confusion occurs when a doctor works to re-establish the 'normal' state. The confusion stems from the question whether the state of health is normal in the normative sense, i.e. that it is a desired state and that is why the doctor aims to re-establish it, or whether it is considered normal by the patient because therapeutics aim to achieve it. Canguilhem claims that it is probably the latter meaning[7] and thus normal is considered not in the normative but rather in the statistical sense. The normal in medicine is then perceived as the desired aim of therapeutic efforts. Normal state is in this sense the viable objective that can be accomplished by therapy. 'The normal' therefore stands for both in therapeutics: the habitual and ideal state of the organs. Doctors do not project normative ideal projections onto the human, but rather help them to achieve such a state that can be considered viable, acceptable and achievable. This is valid especially for physicians who take active part in the treatment rather than those involved in medical theory.

In the famous paragraph of the *Treatise,* where he is treating the systems of morality, David Hume comments on the origins of necessity, of 'ought to be'. Hume points out that it is remarkably quite common for authors especially in the field of ethics to start describing the world by simple factual statements and then quickly turn to normative statements of what ought to be. They usually begin with observations of human affairs and statements what *is* common for human behaviour, what people *do* and how they *act*. Then a crucial moment comes that Hume describes as:

> '… when of a sudden I am surpriz'd to find that instead of the usual copulations of propositions, *is*, and *is not*, I meet with no proposition that is not connected with an *ought*, or an *ought not.* This change is imperceptible; but is, however, of the last consequence. For as this *ought*, or *ought not*, expresses some new relation or affirmation, `tis necessary that it shou'd be observ'd and explain'd; and at the same time that a reason shou'd be given, for

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6 Canguilhem, 1989, p. 126.
7 Ibid.

what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it." [8]

Hume uses the argument to prove that moral judgements accompanying our understanding of behaviour of others are created by our own emotions and 'passions' rather than by the results of reasoning, results of logical analysis of perceived objects.[9] Hume's intentions were to find out how moral judgements come to being, and he came up with the crucial thought about the concept of normality. How is it possible on the basis of perceiving the external influences, i.e. gathering information about the state of the external world, to make a conclusion on something that *ought to be*? Hume observed that simple analysis or collecting facts cannot provide us any orientation about the convenience and inconvenience of the observed facts and therefore reasoning and analysis alone cannot help us in understanding what is desirable.

If we take a closer look on the meaning of the '*ought to be'* from the previous paragraph we can see that necessity has a double meaning. Firstly, there is the necessity of the laws of physics. If we say the rock ought to fall down if we let it go, we simply say that the rock will always fall down, for it is necessary, unless it is caught by someone or it is blown up by the stream of wind, or other eventual scenarios preventing the necessary from happening. By stating 'ought to happen' in such cases we express our knowledge of a physical law, which we inferred from the experience, and at the same time we respect eventualities that can prevent the actual fulfilment of the physical law in a certain case. However, if we state *ought to be* regarding the actions of living beings, we express quite a different meaning. It is not the necessity of physics anymore. When we say '*ought'* and '*ought not'* regarding living beings we try to say that such action is required or prohibited. By saying *ought to do something* about a living being, we express that it is an activity that is to its benefit, i.e. that there is a certain rule (either implicit

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[8] Hume, David, (2007) *Treatise of Human Nature,* New York: Oxford University Press, chap. 3.1.1.27, p. 302.

[9] There are various interpretations of this passage. For some it is just a reminder that the arguments for prescriptive judgements must be properly justified. Some think that this view states that moral judgements do not state facts and are not truth-evaluable. Others interpret the argument in a way that moral properties are not discernible by demonstrative reason. Some see the paragraph as denying ethical realism, excluding values from the domain of facts. For this paper is sufficient to understand this passage as a reminder that prescriptions cannot be based solely on reasoning but there is always a living being implied that considers the object of prescription as desired. Various interpretations can be found in online Stanford Encyclopedia. Cohon, Rachel, "Hume's Moral Philosophy", The Stanford Encyclopedia of Philosophy (Fall 2010 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/fall2010/entries/hume-moral/ (Accessed on 4 Aug 2017). (Cohon, 2010)

or explicit) that is to be followed, which is for some reason beneficial. Not following the rule would lead to unpleasant consequences. This is very different from using the expressions '*ought'* and '*ought not'* regarding the aspects of physical laws.

In addition, we should mention here that there also exists a case when we say that somebody ought to do something in the sense of probability similar to physical laws. It is the case when we assume that somebody will most probably do something, usually based on the knowledge of motives of the agent and so we say that he ought to do it. Leaving room for another possibility we say that it is what is most probably going to happen. For example, if we say that people ought to do shopping during the day because all shops are closed during the night we are rather proposing a degree of probability of certain behaviour rather than prescription of some ideal state. Although even in these cases we can perceive that slight prescription is implicit and it is a prescription of behaviour based on convenience.

To sum up, when we say that something should be, ought to be, ought not to be etc., there are two meanings of such phrases. The first is mainly used for objects, inanimate entities, non-organisms that can be fully described by the laws of physics and probability. We say that something should happen because there is a natural consequence, that something will most probably happen, and we are referring to this consequence. The other meaning can be applied only to living things and it is the meaning of obligation. We presume that what ought to be is something viable, something beneficial that provides benefit for the agent or for the speaker himself or for some hypothetical person. If there is no individuality that could profit from the prescribed state of affairs, there is no prescription whatsoever. Only a perspective that is introduced by individuality enables us to talk about what ought to be.

2.3. Use

There are two kinds of disciplines which focus primarily on what is normal and what is the proper object of norms. The first kind includes disciplines such as ethics, law, politics are at least in principle based on consensus. They explicitly set boundaries of normality in the normative sense. To find out and decide what is normal in the normative sense is one of the main goals of these disciplines. The main purpose of these disciplines is to establish what is the behaviour that should be followed, that is beneficial for the society and on the other hand what actions are to be discarded and forbidden as damaging to the society and its members. Although there are experts in these disciplines, the final discussions and decisions regarding normality are made especially by politics and law – areas which are based on a public consensus. That is why the laws are created by the parliament that at least in principle reflects the opinions of the

whole society, thus proving that laws, which in a way lay down the boundaries of what is normal, are something that should be agreed upon by the whole society. This important aspect of law is explicitly adduced by Montesquieu in his *The Spirit of the Laws*[10].

A law needs to be convenient to a particular society. Every society is different in certain aspects and so must be its law. It must respect a specific nature of its people, history of relations among members of the society and also geographic features of the land where its population resides. Montesquieu describes these aspects in detail especially in the final part of his book, where he specifies how a proper law takes into account variations of climate and of the quality of the land and its usage. Montesquieu solidly advocated that there could not be universal law that would apply to all societies under any circumstance regardless of the specifics of a particular location with its unique climate and geographical features. At the beginning of *The Spirit of the Laws*, Montesquieu emphasizes[11] that laws need to be related to the natural conditions of the land, to a cold, hot or moderate climate, to the quality of the soil, location of the territory and its dimensions, to the way of life of inhabitants working as farmers, hunters or shepherds; laws correspond to the level of freedom that can be supported by the constitution, to the religion, to the desires of people, to their wealth, trade, number, commerce to their morale and traditions. And laws also depend on the relations among the people and are oriented by the intention of the lawmaker. These specific conditions that shape the law according to the actual state of the world is what is referred to by the expression 'the spirit of the laws'. Laws need to be established in regard of these specific characteristics and again effective laws reflect these conditions according to the capacity of the society.

The second kind of disciplines are classified as sciences and are therefore concerned with nature or with empirical facts in general. They are in principle not open to public discussion because they analyse normal cases in the statistical sense at first and only with solid knowledge in this area is one able to state a hypothesis of normative sort. These sciences require vast amount of knowledge in order to be accepted in the discourse. The paramount science of this type is medicine. The decisions about what is normal/abnormal are reserved exclusively to the experts and are made without any consultation with the public. Nevertheless, the medical discussion about normality is not solely academic. It has practical consequences that are often relevant in the same way as the issues of law and politics. There are many cases when a person accused of committing a serious crime was sent to a hospital for treatment instead of a prison

[10] (Montesquieu, Charles-Louis (1989) *The Spirit of the Laws*, New York: Cambridge University Press, 13th print (2008) p. 6-7)

[11] Montesquieu, 1989, p. 9.

because of being classified as mentally ill. Even prior to that, the actual state of physical health has influence on the verdict of the judge. Mental and physical health represent regular circumstances which are taken into account in the courtroom since the mental illness became an object of studies and since a mental illness became classified and a special institution was introduced for its treatment. This is what Michel Foucault formidably described in his work, i.e. that the historical development of these institutionalized practical sciences formed as a discourse that divides the power and control among different members on more levels, interrelated through a sophisticated system of measurement, classification and treatment. Foucault is interested in the historical development of the institutionalization of power and in how the power of the sovereign was replaced by meticulous control and ever watchful guidance and how this responsibility of control and guidance served to set a discourse about different phenomena such as illness, mental illness, criminality, sexuality and by establishing such phenomena in discourse.

This power of the concept of normal in society is quite impressive. We have mentioned the role of medical diagnosis in the courtroom but its power in society is much greater than that. Medicine states what is normal, what is healthy and subsequently persuades the public to act in this way by promoting a certain behaviour as the most convenient. This attitude is expressed with Comte's positivist claim that doctors should not only be educated in the biological imperative, but also in the sociological imperative when treating the patients. In order to do so, it is necessary to get acquainted with the human nature in detail in all its extreme forms. This aspect of positivism is highlighted by Guillaume Le Blanc in his book about the evolution of social sciences.[12] The sociological imperative of medicine was already present in the society before Comte's positivism, the public mental asylums (or lunatic asylums) existed already in the 18th century, thus drawing a line in society between normal – healthy, non-pathological – citizens and not-normal – ill, pathological – patients who were segregated and excluded from the society. The power is not reserved only for medical statements. There are other norms that are considered normal, that have an immense power to influence the society. These norms such as norms of physical beauty, norms of clothing, nutritional norms etc. by the separation of the normal from the abnormal they control and set what is required from the subject of a society.

[12] Comte, Auguste, Système de politique positive, t. II, p. 436 cit. in Le Blanc, Guillaume, (2005) *L'esprit des sciences humaines*, Paris: J. Vrin, p. 137)

In his historical excursion to the origins of asylums in *Madness and Civilization*[13], Foucault states that asylums and mental hospitals developed from the quarantine where leprous where interned so that they were isolated from the rest of the society. These buildings were after the eradication of leprosy used as facilities for maladjusted and criminals as well as for lunatics, maniacs and psychopaths. It is important to point out that such classifications were not a result of medical diagnosis, it was a solution of social issues and the purpose of internment was not medical, but it was a simple isolation from the rest of the society. It was only much later, when medical supervision was added to the process of internment and later the internment came to be understood as a type of medical treatment. Therefore, initially there was the classification according to the acceptability of an individual in the society which was later transformed into mental sanity.

In modern times this relation has been completely reversed as nowadays the classification of mental insanity eventually leads to internment. Following Foucault's thought we could say that medical diagnosis regarding the mental health followed the practice of internment. Medical diagnosis of mental illness was adapted to the current practice and evolved together with it. I will point out here that Foucault describes the evolution of the practice of normalization regarding mental health from the perspective of unbiased observer. He does not take the subjective evaluation of the patient into account. He is interested in the relations of power that define and treat patients, but the subjective feeling of suffering of the patient does not come into account. Pierre Macherey, a commentator of Foucault and Canguilhem who is interested in the problems of norms and normativity, calls this Foucault's positivism.[14] Macherey mentions this term with regard to the studies of sexuality where sexuality is nothing else than historical and social experience of sexuality, there is no single entity that could be understood in principle, the sexuality is the totality of historical and social experience of everything that was referred to as sexual. Foucault uses the similar reasoning in studies about mental sanity. The patient's own subjective view has no significance for Foucault's thought. Patients are approached from the perspective of the institution that is there to manage them. One's own subjective view is, however, important for Canguilhem as it is fundamental for making a judgement about a pathological state. The perspective of the individual represents everything for the understanding of a disease for Canguilhem – without this perspective the pathological

[13] Foucault, Michel, (1977) *Madness and Civilization: A History of Insanity in the Age of Reason*,London: Tavistock. (Foucault, 1977)

[14] Macherey, Pierre (2009) *De Canguilhem à Foucault la force des normes* (2009), Paris: La fabrique édition p. 89.

is merely a statistical fact and it is only through this perspective that we acquire the qualitative phenomenal experience of the pathological.

3. The Living and The Normal

The famous article *Mechanism and Organism* which was later published in Canguilhem's *Knowledge of Life* will serve as the starting point for the theme of the relation between norms and living beings. We will present Canguilhem's criticism against the positivist tendencies to explicate the vital functions of organism strictly mechanically. Then we will analyse what it means to be normal for a machine by treating differences between a living organism and a machine when it comes to normality. This will lead to the demonstration that a mechanism cannot serve as a model for organic processes, for their relation is completely reversed. We will see that the machine can be considered as a certain extension of an organ, but organism cannot be reduced to a mechanic assemblage. This comparison will manifest the unique feature of a living tissue which consists in the possibility of autonomously changing the functionality of tissue according to the actual needs of the organism. In the second part of this chapter we will concentrate on the terms anomaly, variety and their relation to abnormality. We will turn to the main text of Kurt Goldstein, *The Organism*[15] where he explains what is the role of anomaly and whether an anomaly is abnormal or not. It will help us to demonstrate the importance of anomalies and to explain their role in adaptation. Anomalies will be taken into context of abnormality. Due to the fact that these two notions are quite often confused and their meaning reversed or merged, which is misleading, I will clarify their relation and state in what they differ. Goldstein was an important source of inspiration for Canguilhem. They shared views also on the role of anomaly in the adaptation of organisms to their environments. I will shortly present the Goldstein's criticism of the conception of the environment of Von Üxküll which inspired Canguilhem's conception of an organism as a self-defining and auto-normative.

3.1. Theory of Animal-machine

The concept of mechanism still serves as a paradigm for understanding living beings. The key aspects of this explanation are founded in Descartes's natural philosophy which is mechanistic. The Cartesian nature was in principle inanimate, it was a mechanistic nature. Mechanistic explanation involved even non-extensive qualities (secondary qualities), which were reduced to special forms of sensibility based on mechanical movement.[16] Cartesian biology generally ignores the realm of plants, as it is concerned only with the animal realm

[15] Goldstein, Kurt, (1939) *The Organism: A Holistic Approach to Biology Derived from Pathological Data in Man*, New York: American Book Company

[16] Pichot, André, (1993) *Histoire de la notion de la vie,* Paris: Gallimard, p. 307

where man holds an exclusive position.[17] Probably it is also because animals seem more similar to machines, than plants. Plants prove by their capacity of vegetative replication that they are not merely machines that respond to impulses, they are sentient organisms. In *Plants as Persons*, Hall sums up that Descartes may not argue specifically against the sentience of plants, however, he retains Aristotle's notion of them as insensitive and nonvolitional.[18] Animals as well as plants in the Cartesian theory do not possess any consciousness and are completely dependent on the mechanical processes. The Cartesian theory, inspired by Aristotelian thought, considers a living being as an automated machine and its motor is located in the heart as 'a fire without light'[19], internal heat, that sets off the mechanical movements. The difference between the conceptions was in *telos* which Aristotle attribute to all matter whereas Descartes understood matter as lacking in *telos* and therefore internal motion. In Descartes' concept all matter was made by God and animal body was a machine made by God.

To certain extent, the mechanistic theory of the organism was always accepted as a dogma in biology.[20] Canguilhem explains that mechanistic theory in biology presented the relation between the machine and the organism in one direction. The explanation of a functionality in the organism was almost always based on the structure and functionality of a previously constructed machine. A mechanism is a configuration of solids in motion in such a way that the motion does not abolish the configuration and the whole configuration is created for a certain purpose. Subsequently, a machine is an artificial construct, a work of man and its functionality is based on a mechanism.[21] In this definition of mechanism and machine there are two aspects to be highlighted. Firstly, it is the fact that a machine is man-made and secondly, that it is a configuration of solids in motion. These two characteristics of mechanism and machine were perfect for explanatory reasons. Mechanisms and machines were easily understandable for most (as it was based on common objects) and mainly the effect of the mechanism was based solely on the configuration and motion. However, it is still quite surprising that something so distant

[17] Ibid., p. 342

[18] Hall, Matthew, (2011) *Plants as Persons. A Philosophical Botany*, Albany: State University of New York Press, p. 48.

[19] Ibid., p. 345

[20] Canguilhem, George (2008), *The Knowledge of Life,* trans. Stefanos Geroulanos, Daniela Ginsburg. New York: Fordham University Press, p. 75.

[21] Ibid., p. 76

in its nature from living things could serve as a paradigm for the explanation of these organisms.[22]

Still, analogies between animal organs and machines abound throughout the history of philosophy. Plato in Timaeus presents an analogy between the movement of vertebrae and the movement of a hinge or hitch.[23] When describing movements of mechanical catapults Aristotle used the analogy between animal motion and automated mechanical motion. Aristotle also compares the movements of limbs to mechanisms such as catapults.[24] Descartes' mechanistic explanation of animal movement was very influential. Although there are differences between Aristotle's and Descartes' theory, there is a common assumption consisting in that the mechanistic explanation of movement presupposes a man-made device, in which an automatic mechanism is linked to a source of energy, whose motor effects continue long after the original human or animal effort producing the energy has ceased. This interval between storing up the energy and its release obscure the fact that the machine's operation depends on a previous supply of energy so that it could work seemingly by itself without any previous impulse of a living being.

In searching for analogies in machines that could help him to explain how organisms function, Descartes stays within the framework of the technological concepts of his age. It means that movements of living things might be explained by analogies with automated mechanical objects only when such mechanical objects exist, i.e. had been previously invented. It is certainly tempting to succumb to the belief that by likening the actions of organism to a mechanism, we fully grasp the nature of the organism. An important aspect of Descartes' mechanistic explanation of nature was that man became transcendent above the nature and the matter. For man, the nature and matter in general are modelled according to his own liking.

Canguilhem argues[25] that the impulse for the mechanistic explanation of the universe was rather given by the development of the mechanization which started already a century before Descartes through the inventions from the Renaissance era and Leonardo da Vinci as its leading figure. Descartes consciously rationalized and expressed the mechanist technique that could be

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[22] It is worth mentioning here that mechanism is in fact nothing but an assemblage of parts that are influenced only by kinetics. The mechanism is hence different from an engine or motor which operates on a different principle.

[23] Plato, *Timaeus*, 74a.

[24] Aristotle, *De motu animalium*, *Quaestiones mechanicae*.

[25] Canguilhem, 2008, p. 82. Canguilhem is paraphrasing an article from Grossman (Grossmann, H., (1935) „Die Gesellschaftlichen Grundlagen der mechanistichen Philoso- phie und die Manufaktur". *Zeitschrift für Sozialforschung.* Year. 4, No. 2, p. 161–231).

absorbed from the inventions and discoveries of his era. Descartes respects the *theory of inventions*, which presuppose that an invention – a machine – is created by man and then it is up to the science to intentionally analyse and promote the mechanics of the machine. Descartes was expressing a mechanistic view that was very tempting because it could provide an explanation to a great deal of animal and natural processes. As the machines became isolated enough so that they seemed to function without any prior accumulation of energy , it could easily start to resemble living animals. [26] Also the explanation of animal movement or behaviour parallel to a machine was very convenient because it could easily abstract from small aspects and difficulties which were found in vital functions.

Incidentally, but still intentionally, Descartes devalues animals and relegates them to the subjects of human will. Descartes explicitly acknowledges this[27] and he understands it as an act liberating humanity from the guilt introduced by Pythagoreans[28]. In Descartes' ideas we can see the important crossroad of western civilization. Descartes reinterprets the classical themes of Aristotle and Galen (heat produced by heart, cooling effects of respiration, etc.) according to the mechanistic explanation.[29] The theoretical mechanization of life and technical utilization of the animal go hand in hand and one reinforces the other. This tendency still represents a valid paradigm today and the technical utilization of nature has grown rapidly since the theoretical mechanization of life by Descartes. With the categorical difference between *res extensa* and *res cogitans* and their strict separation, every extensive object was made unintelligible by reserving every intelligent action to *res cogitans* – to a fully developed mind.[30] Descartes' radical separation of mind and matter explained life as lacking any cognitive capacity in principle and machines with their mechanisms served as perfect illustration of the mind-matter separation hand in hand with the lack of intelligence characteristic of machines as they simply respond to mechanical impulses. Canguilhem sums up this approach by stating that man can make himself a master and possessor of nature only if he denies it any purpose and considers all of nature, excluding himself, to represent merely the means for his intentions, a tool to be used according

[26] Descartes mostly thought about watches and clocks, hoisting machines, water-powered machines, etc.

[27] Descartes, René, (1954) „Lettre à Morus, 5 février 1649". In:, *Correspondance avec Arnaud et Morus*. Paris: J. Vrin, p. 127.

[28] Pythagoreans believed that a human soul migrate through different animals and therefore animals cannot be eaten as they could carry human souls in transition between bodies.

[29] Pichot, 1993, p. 356.

[30] Jonas, Hans, (2001) *The Phenomenon of Life. Toward a Philosophical Biology*, Evanston, Illinios: Northwestern University Press, p. 58.

to his will.[31] It should be pointed out here that the identification of purpose is crucial. If we look at moving objects as not having a purpose in itself, we regard them as inanimate objects. They become a simple result of external forces according to the laws of physics. This is how we perceive planets, stars, rocks, rivers, dirt, etc. The idea of purpose does not apply to them and we can fully describe such things by explaining their physical attributes and forces that influence them. A constantly followed course, a set of actions with a certain orientation, an intention, a purpose is something that we associate with living beings.

It is now becoming more clear why the idea of animal-machine became accepted so easily. The role of the creator of a machine is essential. Without the creator there is no machine, there is not even an idea of the machine. And similarly many machines can be created with slight differences, but still follow the original idea of the inventor. Then *it seems* that the machine acts by itself, moves autonomously and performs difficult tasks, however, these were still fully projected by the creator. This concept is perfectly in line with the relation between God and living creatures. According Descartes, God acts as the inventor, creator, a sort of perfect watchmaker, who originally assembled and created all the living things which can later act themselves. Nevertheless, the touch of their creator is present at all times. Hence, this explanation helped with two problems: first, to explain how God could create all things in advance and still be present in their actions; and second it also provided man with the power over other living beings which were conceived as mere machines and were therefore completely for man to use.

Descartes' project proved in the end that the mechanistic explanation cannot prevail on its own without any notion of finality or anthropocentrism. Although the functionality of a machine can be understood by the explanation of causal links in the machine itself, the *creation* of a machine as such is not understandable at all without the existence of a human who creates the machine for his own benefit. Descartes is trying to exclude the anthropocentric finality from his mechanistic explanation but Canguilhem criticizes him for introducing technological anthropomorphism instead of political anthropomorphism[32]. The classical idea of a soul governing the body in the sense of a general commanding his army (political anthropomorphism) is substituted by the idea that the body must be physically predisposed in order to receive physical impulses (technological anthropomorphism). Anthropomorphism only changed its means. Instead of political commandment – a type of causality by a sign or a word,

[31] Canguilhem, 2008, p. 84.
[32] Canguilhem, 2008, p. 86.

the soul governs the body by mechanical connections – by a certain device. Pichot argues in a similar manner and states that the mechanistic explanation of a functionality of an organ is not sufficient for establishing mechanistic biology. The very reason for this is that the organ, whose functionality is in question, is defined by a finalistic explanation.[33]

We can conclude that the mechanistic explanation did not succeed in avoiding without finality, although that was its original motivation and one of the goals of this conception. Mechanistic explanation can prove useful if the existence of machines is already granted. But it can never explain the construction of machines. In principle, machines can be created only by living beings, never by different machines. Machines could be conceived in this sense as prolonged organs of the animal body: organs are as machines and machines as organs of the living body. It is the proper relation of a machine and a living organ. Machine is conceived as part of the body thus becoming part of the organism. Merleau-Ponty describes how the bodily synthesis can enlarge and include artificial things.

The mechanist explanation of living beings tends to reduce an organism to a machine, that is in case of human being guided by a mind that is separated from the body. Such conception eliminates the unique psychosomatic nature and replaces it by simple mechanistic function of a body. From this mechanist perspective there are phenomena that cannot be explained by mechanistic explanation. An important factor here is the role of habit, that belongs solely to the living bodies. A detailed analysis of habit with metaphysical connotations can be found in the work of Felix Ravaisson[34] who inspired a lot of thinkers among others Merleau-Ponty who illustrates the influence of a habit in the *Phenomenology of Perception.*[35] He chooses an example of a blind man who starts to use a white stick. In such a case the blind man does not calculate the impulses he receives from the stick to his hand, after a while he does not even consider the stick as something external to the body. The stick becomes a part of his body. It prolongs his capacity of sense. The existence is modified and the end of tactual field shifts from the fingertips to the tip of the stick. This cannot be explained when a living body is comprised as a (mechanical) object among other objects. An organism with its body instead of an object is rather a synthesis of functions that adapts to the current requirements of the environment. As

[33] Pichot, 1993, p. 385.

[34] Ravaisson, Felix, (2008) *Of Habit*, trans. Clare Carlisle and Mark Sinclair, New York: Continuum International Publishing Group.

[35] Merleau-Ponty, Maurice, (2012), *Phenomenology of Perception*, trans. Donald A. Landes, New York: Routledge, p. 153-154.

a synthesis of functions, the living organism aims to find its equilibrium. Petr Kouba[36] sums up this concept of equilibrium in an article about health and disease and says that the essential characteristic of the equilibrium is the capacity to forsake previously achieved equilibrium and by creating new meanings to reveal previously unavailable possibilities and thus achieve a new equilibrium. This conception of vital equilibrium helps to overcome the dualistic Cartesian concept separating body and mind and the dualist understanding is replaced by the complexity of a corporal existence of being-in-the-world. The conception of equilibrium also implies that disequilibrium is something that is a necessary constituent of the equilibrium. The equilibrium is not something fixed or rigid, on the other hand it is a constant struggle in overcoming the disequilibrium. The disequilibrium is a necessary step so the new equilibrium could be achieved.

3.2. Mechanism and Normality

The rise of machines and their permeation into the spheres of human activity since the Renaissance made them useful models for explaining how living things move and act. Machines and mechanisms perfectly submit to norms in general. Every mechanism is assembled or at least virtually assembled from parts. Each part of the mechanism plays a certain irreplaceable role in its functioning and each part must be made from a proper material to fulfil its role. Every mechanism is functional only when it is in compliance with laws of physics and its construction must meet certain material and layout requirements. Every part of the mechanism is important for the functionality of the machine and whenever a single part does not work, the whole mechanism cannot function properly or cannot operate at all.

Compared to a living being, it is much easier to define the normal state of a mechanism. We could easily say that it is the state when every part of the mechanism is properly in its place and it is capable of operation without any ruptures or material failures. In this state, the machine can work as it was intended by the inventor of the machine. A normally functioning mechanism is such that in its normal state, it is capable of operating without any unexpected or even damaging consequences to itself. The motion of a mechanism functioning normally, is fully foreseen by the constructor and is by no means autonomous or self-guiding.[37] A machine

[36] Kouba, Petr, (2005) „K Nietzscheovu pojetí zdraví a nemoci“ in *Nietzsche a člověk* Praha: Fakulta humanitních studií, Univerzita Karlova. (Kouba, 2008) (Ravaisson, 2008)

[37] This fact is still valid today, even with machines with very complex sensor and computing capabilities, which can give recommendations or perform tasks that could not be foreseen by a human. Even these machines are built with an original purpose in mind and the machines can do nothing but fulfil this purpose to the best of their capacity. Another issue is that this purpose can be quite vague,

working normally, exists in accordance with the norms that were imposed on it (in the forms of proportion and organization of parts) or that were utilized in the creation of its mechanism (laws of physics). The normal state and normal functioning are therefore well-known and in principle non-problematic, as it was exactly the normal functioning which the inventor envisioned when constructing the first model of a machine. To sum up, the normal state of a machine is the state which was intended by the inventor as the most convenient one in order to profit from the utilization of the machine. In his recent book *Le sujet des norms,* Macherey characterizes a relationship between a norm and reason and says that a norm is an instrument, a tool that makes possible for the reason to leave its trace in reality by means that are clear and direct, that permit the orientation and guidance which maximizes the effects of some benefit.[38] Macherey points out here that norms that are utilized intentionally always are here for the benefit of the one who uses them. This is the very case of machines, where norms are a way for reason to form the reality for the benefit of the individual. The invention and production of a mechanism could be taken as a paradigm of the beneficial utilization of norms in practice.

What happens to a machine, which, for some reason, stops to function normally (i.e. in the usual way) or which is not in the normal state anymore? Machines which are not in the normal state deviate from the norm, i.e. they cannot work properly. Perhaps if the damage or the malfunction is not too serious and the machine could still work, the operation would be less smooth and would end up by seriously damaging the machine which would eventually stop working altogether. What is totally certain is that the machine would not repair itself.[39] Machines and their mechanisms are created to strictly follow certain norms whose purpose is to make sure they operate properly. When some part is not in compliance with that norm, then the mechanism cannot proceed and the machine does not work. When there is abnormality in the mechanism, it is an obstacle that cannot be overcome by the machine alone. Abnormality stops the process, the mechanism cannot perform its movements and the machine is broken. It is unthinkable that it could work without the missing broken part.

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especially in case of complex machines, and then the machine can calculate and perform such actions that would not be intended by the creator. However, such an action cannot be conceived as an autonomous or even self-conscious activity. It is still an attempt of the machine to follow the original purpose; however, from the point of view of the creator it is perceived as a faulty attempt and as a malfunction of the machine.

[38] Macherey, Pierre (2014) *Le sujet des normes*, Paris: Éditions Amsterdam, p. 20.

[39] The argument that there exist machines nowadays that have very sophisticated system of sensors which can track out any damages and malfunctions and even repair them, could not be accepted as this system was invented by the inventor of the machine and was implemented intentionally in the machine, thus being in fact a machine in a machine. This is completely in accord with the machine theory and is not self-repairing at all.

If a broken part of a machine is properly replaced with a new part, then the machine will work as smoothly as before. It will return to its original, normal state. If needed, parts of a machine can be replaced whenever they are broken or overused. Of course if a part gets broken, the mechanism cannot use another part to replace the missing part on its own, unless such an action was predicted by the inventor and implemented in the machine before. This phenomenon of replacing a damaged part by a different kind of organ is typical for living tissue. There are multiple cases of such an occurrence that are completely natural and happen without any medical assistance – when a damaged part of a living body, is substituted by another part of the body, and the new part takes over the functionality of the damaged part. This is something that the living tissue is capable of quite often, which is even more remarkable concerning the fact that the replaced and the new part do not have to be of the same sort. Observation of this phenomenon dates back at least to Goldstein. He presents an example with the spinal cord. When the spinal cord is cut at any level, there is an immediate loss of certain performances, such as reflexes, sensitivity, etc. In such case the patellar reflex may be elicited from the zones that are normally not reflexogenous.[40] This is of course something that a machine is incapable of. This phenomenon describes François Dagognet[41] in his monography about Canguilhem by differentiating an object and a (living) body. When an object loses one of its parts, the rest does not compensate in the loss in any aspect. On the other hand, a living body in order to keep on with the existence is tries to compensate and overcome a lost part. Dagognet explains that this is possible thanks to the overall sympathy of different parts of living body that correspond altogether. This phenomenon supports Canguilhem's effort of the rehabilitation of vitalism. Goldstein criticized the mechanistic concept of reflexes. This concept presents reactions of organisms on the basis of reflexes understood as simple mechanical reactions to various stimuli. In this concept a stimulus causes a constant reaction. Goldstein argues that this idea isolates parts of the organism and does not consider an organism as a whole.[42] Moreover, he adds that it is almost impossible to isolate a single factor and to consider it the sole determinant for the effect of the stimulus. Also the effect does not depend solely on the stimulus. It also depends on the condition of the stimulated organ. Therefore, the effect depends not only on the stimulus but on the total conditions prevailing in the organism at that time. An organism unlike the

[40] Goldstein, 1939, p. 134. Goldstein lists several cases of overcoming of various impairements such as blindness, mobility limitations.Ibid., p. 226-249).

[41] Dagognet, François, (1997) *George Can* (Dagognet, 1997)*guilhem. Philosophe de la vie*, Paris: Institut synthélabo pour le progrès de la connaissance, p. 172.

[42] Goldstein, 1939, p. 79-86.

machine therefore cannot be treated as an assembly of isolated parts because the organs and tissues are essentially united and respond to various stimuli together in a unique way that is an expression of the whole organism.

It quite often happens that a part of a machine is replaced by a new part that has the same functionality as the original one plus a new functionality that enhances the overall functionality of the machine. This is usually the way machines 'evolve' and from the long-term perspective, it seems that machines evolve similarly as living beings do; however, it is of course just an illusion as the machine first 'evolves' in the mind of an inventor or upgrader, and only then can the machine be modified according to the inventor's newest idea.

3.3. Anomaly and Adaptation

Everyone has a vague common understanding of what the terms anomaly and abnormality mean. They describe that something is not usual, that it deviates from the normal. A very valuable and clear explanation of both terms and their meaning can be found in Canguilhem's doctoral work (*Essay*)[43] Canguilhem refers to *Vocabulaire philosophique*[44] from Lalande and explains that an 'anomaly' is a noun which does not have a corresponding adjective, and is derived from the Greek adjective ὁμαλός, which means that something is levelled (regarding surface), even, smooth, regular, equal, average. 'Anomaly' is a derivative of this word created by adding a prefix '*an-'* that negates the prefixed word. *An+omalos* therefore means that which is uneven, rough, irregular. This term was originally used in the description of terrain. The etymology of the word anomaly is often interpreted wrongly. Due to the similarity with the word *nomos*, which is the Greek word for a law, rule or custom, the term *anomaly* is sometimes considered as originating from the word ἄνομος, which means lawless, but that is not correct. The word *nomos* is related to the Latin word *norma*, meaning also a rule or law and hence the confusion of the meanings of the terms anomaly and abnormality. But there is a difference, and quite a substantial one, as Canguilhem puts it: "'anomaly' points to a fact, and it is a descriptive term, while 'abnormal' implies reference to a value – it is an evaluative, normative term."[45] It means that 'anomaly' refers to a statement about an attribute being irregular or simply different

[43] Canguilhem, 1989, p. 131-132.

[44] Lalande, A., (1938) *Vocabulaire technique et critique de la philosophie*. 2 vols. and 1 suppl. 4th ed. Paris: Alcan, cit in Canguilhem, 1989 p. 131.

[45] Canguilhem, 1989, p. 131-132. There is one more difficulty with the original French word *anormal* where the prefix *a-* can be understood as negation. The meaning of *anormal* would then be not-normal and therefore not having any norms. As we will see a living being always follow some kind of norms and therefore this meaning is not appropriate.

from the most similar and common cases. It also refers only to the actual state without any implication as to what ought to be or what is the proper state of the attribute. On the contrary the word 'abnormality' or 'abnormal' indicates that the object of reference is not in the state in which it ought to be, that it is out of norm, it also implies that the value of the thing is diminished. The term abnormal expresses the attitude of the speaker and it is therefore a judgement.

Sadly, however, the confusion in the etymology regarding these terms led to the situation that often both terms are used interchangeably and 'abnormal' becomes a descriptive concept and 'anomaly' a normative one. Nevertheless, in anatomy the term 'anomaly' should strictly maintain its meaning of unusual, unaccustomed or simply different. Anomaly is to be related to two biological facts, the specific species and individual variation. All living species are represented by individuals with countless variations in the form and proportional volume of organs, but there is also always a complex of traits that is common to the vast majority of individuals who compose a species and this complex of traits defines the species.[46]

Canguilhem cites the work of Geoffroy Saint-Hilaire presenting a definition of anomaly: "Every deviation of the specific type, or in other words, every organic particularity introduced by an individual when compared with the vast majority of individuals of his species, age and sex, constitutes what can be called an Anomaly."[47] This definition makes it clear that the anomaly is a statistically speaking a rare case, an exceptional difference and thus it does not express any judgement as it expresses the factual statement, not a statement of value. The anomaly is a simple statement identifying a single or multiple features as different in an individual compared to other members of the same species.[48] Although we can simply consider anomaly as an extreme case of common individual differences, we have to admit that the difference in the case of anomaly is somehow more serious and sometimes even structurally different. There is a slight difference between a common variety and anomaly. For example, a variety is manifested by different shapes, lengths, thickness and other features of fingers, whereas an example of anomaly is being born with four fingers on each hand. Anomaly is

[46] Goldstein reminds the definition of a species by Üxküll. A species, is based on the capacity of a reproduction. The species is that number of different individuals which, when crossed, can still produce offspring, capable of living and propagating. Goldstein, 1939, p. 452.

[47] Geoffroy Saint-Hilaire, I. (1832), *Histoire Benerale et particuliere des anomalies de J'or, Banisation chez J'homme et les animaux*. 3 vols. and one atlas. Paris, -B. Bailliere, [43, I, 30] cit. in Canguilhem, 1989, p. 133.

[48] In this context we should talk only about the anomaly in human nature as this is the only species that we are certain about and it saves us a lot of complications in dealing with a concept of species for various animals.

different from simple variety in the basis of frequency of occurrence – anomalies are exceptional cases of variety. Here is why the reference to larger social unit becomes important with anomaly, for we first have to familiarize ourselves with the scale of variety in an organic structure. Only after that we can clearly state that certain structural configuration is an anomaly as opposed to common variety. Anomaly by itself does not have a negative meaning. Considered on its own, it could not be recognized as an anomaly at all. Something qualifies as unusual only after we compare it with other individuals from the same class. Nevertheless, it still does not mean that it diminishes life potentiality *per se*. Canguilhem argues for the same position as Kurt Goldstein, who also understands anomaly as not necessarily entailing an impairment of individual's abilities. Goldstein also remarks[49] that an anomaly always has an implicit reference to a larger social unit and that an anomaly can be understood as such only in reference to a "super-individual" norm. And again, as Goldstein emphasizes, the super-individual form manifests itself always in the individual proper. The reference to the larger social unit serves to distinguish it from mere variety. Goldstein remains sceptical to the concept of the species and that is why, when talking about super-individual norm, he always understands it as certain features of an individual. And so super-individual norm is a term expressing that an organism shares some feature with its fellow organisms and thus judgements about these features are possible regarding a whole group rather than that there being a supra-individual norm representing all the organisms at once. [50]

From what was mentioned so far it is clear that anomaly is not equivalent with monstrosity, for monstrosity is only a special case in which anomaly has a negative impact on the individual. Isidore Geoffroy Saint-Hilaire, a biologist renowned for his work in teratology, describes monstrosity as a complex anomaly with serious consequences on the life of the living being. He presents a scale of anomaly: Simple minor anomaly which does not obstruct the performance of any function of the organism and produces no deformity is identified as *Variety.*[51] Simple anomaly, which is considered minor from the anatomical perspective and which prevents the performance of one or more functions or causes a deformity, for example a cleft lip, is called a s*tructural defect*. Complex anomalies, serious in appearance and in terms

[49] Goldstein, 1939, p. 451.

[50] The notion of super-individual norm is used so the instance of anomaly could be stated. There must be a reference to a larger social unit where it makes sense to talk about super-individual norms. These norms are common for multiple individuals, but their existence is bound with the existence of the individuals. Goldstein talks only about the super-individual norms.

[51] We tried to demonstrate that anomaly is not a simple a variety and it is rather an extreme case of variety and therefore called anomaly.

of anatomy, which, however, do not impede any function and are not apparent on the outside, are called *Heterotaxies* by Saint-Hilaire. A rare condition of *situs inversus* is mentioned as an example of heterotaxy. This condition causes the heart and major visceral organs to mirror their normal positions with a heart on the right side of the body. Finally, *Monstrosities* are very complex anomalies, very serious, making the performance of one or more functions impossible or difficult, or producing in an individual a defect in structure very different from that structure that is ordinarily found in the species. Examples of monstrosity are ectromelia or cyclopia.

The order and logic of the scale is based on two dimensions. Anomalies are sorted according to their increasing complexity and increasing seriousness. The dimension of complexity, the decision whether an anomaly is simple or complex, is objective and apparent. It is obvious that a cleft lip is a less serious anomaly than hermaphroditism or cyclopia. The seriousness of an anomaly is not as clear as the complexity aspect, but it could still be an object of classification. The seriousness of the anomaly can be related to the gravity of the damage it causes to the functioning of a certain organ and the overall importance of the organ in the organism. Even though for a naturalist, importance is an objective category, Canguilhem argues that it is in fact a subjective one, as it includes a reference to the life experienced by a living being.[52] Saint-Hilaire probably felt that the two principles of classification were not sufficient to describe the different sorts of anomalies and so he added two more principles – a relation between anatomy and the exercise of functions, the physiological dimension; and the last one that is partly psychological, the idea of a *harmful* or *disturbing* effect on the exercise of functions. The last principle is crucial because if an anomaly is not harmful or does not have any disturbing influence, it is not registered during the life of the individual and it often prevails until the death of the individual. Then, only much later during the *post mortem* examination it is found out that there was an anomaly and it could have been quite a complex one, even a heterotaxy.

Unless there is an obstacle for the performance of bodily functions or discomfort, the anomaly remains unnoticed, but a discomfort, harmfulness or an obstacle is a sensation of a normative sort because in this perception of discomfort or harmfulness there is already an unconscious reference to a certain function and there is an original impulse to the completeness of their exercise. This means that by feeling discomfort and obstacle during an activity that we used to perform without such discomfort or obstacle, perhaps when others are still capable of doing so, we feel that such discomfort should not be present, that it is an abnormal condition.

[52] Canguilhem, 1989, p. 134.

Hence, as long as the anomaly has no functional repercussions either experienced consciously by the individual, in the case of man, or "ascribed to life's dynamic polarity"[53] in every other living thing, the anomaly is either ignored or constitutes an indifferent *variety.*

Although the anomalies up to heterotaxy do not have necessarily a negative effect on life, monstrosity is definitely negative. Canguilhem defines a monster as 'a living being with a negative value'.[54] Canguilhem with the idea of value of living beings refers to Eugène Dupréel that identifies the value of living beings in a milieu with their consistency as a species. Consistency is expressed in the resistance to deformation and struggle for the integrity of a form. The resistance is in the form of regeneration of mutilated organs or mainly by the reproduction at all.[55] Monster is thus not only a being whose value is reduced, its value is a counterpoint to positive value of life. The vital counter-value is therefore not death, but monstrosity.

> Death is the permanent and unconditional threat of the organism's decomposition, the limitation from without, the negation of living by the non-living. Monstrosity is the accidental and conditional threat of incompleteness or distortion in the formation of the form; it is the limitation from within, the negation the living by the nonviable.56

Monstrosity, as negative anomaly, is contradictory to the life. Monstrosity is a threat to the life in its form. It is the opposite to the vital form. The death is a mere complement to the life. The death is a negation of a life in an individual, monstrosity is an opposition to the life in a particular form.

Thanks to this analysis of the anomaly we can now see why an anomaly is not necessarily abnormal. The confusion of both terms anomaly and abnormality tends to suggest that every anomaly as abnormal. We should admit that it is also a sort of natural defensive attitude towards the unknown, exceptional and irregular. When we encounter something unfamiliar and strange, we tend to reject it as wrong and deplorable. Nevertheless, there are all sorts of anomalies that go without notice, which do not cause any discomfort or do not complicate life at all. The classification of anomalies is based on their impact on the life of the affected entity, which is

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[53] Canguilhem, 1989, p. 135. Life's dynamic polarity is Canguilhem's term that describes the dynamic and mutually influential relation between a living being and its environment. It is the perpetual communication and reaction of one to the other.

[54] Canguilhem, 2008, p. 135.

[55] One of the determinant features of monsters is that they are not capable of reproduction.

[56] Canguilhem, 2008, p. 135-136.

something usually very complex requiring the consideration of many other aspects, above all – the environment of the living being.

Anomalies represent alternative ways of nature in each individual. As there are many different kinds of anomalies, some of them might prove useful in certain situations. However, this cannot be stated just by analysing an anomaly on its own. Effects of an anomaly can be assessed only after knowing the environment of the analysed subject and the activities regularly performed by the subject. If an anomaly proves itself beneficial for life, it can be transferred in the long term to offspring as an evolutionary advantage. In the long term this variety, represented by the numerous cases of anomaly, becomes a form of adaptation. While many anomalies are useless or damaging and some are beneficial, all of them are natural varieties, cases that are in fact competing between each other about which one is the most suitable for the current environment, which can adapt best to changing conditions of the environment. If an anomaly causes discomfort and pain and thus complicates life, it is considered abnormal, undesirable. It is not convenient for it to become a vital norm. The damaging effect of an abnormal anomaly can be described in the way Saint-Hilaire did. Canguilhem points out that monstrosity is connected with higher organic life as there are no mechanical monsters[57] and no mineral monsters. Therefore, the concept of anomaly is understandable only among the high organic life and presupposes the relation between an individual and species and takes into consideration the quality of life or adaptability.

In his summary of *Philosophie de la biologie*[58] Christian Sachse sums up the concept the adaptive role of anomaly and claims that it is *due to* genetic variety, mutations, recombination, migrations, etc. and their cumulative nature, the natural selection enables the adaption of organisms to different environments. Adaptation can be defined as an evolutionary modification that enhances the fitness of an organism under the pressure of natural selection. Anomalies are therefore attempts of nature in finding the best suitable organization of a living being in its environment. Sachse offers a clear guide for anomalies, whether they are in the benefit of the living.[59] If the changes caused by an anomaly make the living being fitter in its environment, such changes may be considered as a form of adaptation. And on the contrary, if changes caused by an anomaly do not make the living being fitter in its environment, it is not an adaptation of the organism, but merely a void attempt of natural selection. The individuals

[57] The common term ‚mechanical monster' refers simply to a big machinery.

[58] Sachse, Christian, (2011) *Philosophie de la biologie. Enjeux et perspectives,* Lausanne: Presses polytechniques et universitaires romandes.

[59] Sachse, 2011, p. 38.

who are fitter in their environment accumulate in the population and those who have disadvantages for the survival or for the reproduction are likely to vanish in the long term. Hence, adaptation is the result of the natural selection of individuals who have a higher level of fitness compared to their kin.

It is becoming evident that it would be absurd to consider anomaly as abnormal. On the contrary, anomalies are completely normal in both the senses of the term in the statistical[60], representative sense as well as in the prescriptive, normative sense. Anomalies are a way of nature how to compensate the fact that the evolution is selective and eliminates variety in the process. Therefore, saying everyone is born unique is more than just a phrase, it is a natural fact and a necessary condition for the preservation of variety of organisms. We have mentioned that anomalies are a way to adapt to the perpetually changing environment. And also, whether an anomaly is an advantage or causes discomfort may be decided only with regard to a particular environment and a particular organism living in the environment. The environment becomes an integral part of considerations of organisms.

Still, Goldstein does not link the adaptation with the evolution but simply with the environment. For Goldstein the adaptation is a relation that an organism has towards his environment. The adaptation is not an instrument of the natural evolution, instead, the adaptation is a capacity of a healthy organism to inhabit its environment.[61] The restoration of health means therefore establishing 'the relationship between preserved and disturbed performances'. In sum, Goldstein interprets the adaptation as a reaction of an individual to the particularities of its own environment. He does not make any evolutionary assumptions concerning adaption and sees the adaptation as a response or 'responsiveness'[62] of an individual to its environment and not as an evolutionary strategy of a species.

3.4. Milieu of The Organism

The adaptation process can be considered as a form of communication between an organism and its environment. It is up to the environment to evaluate the role of an anomaly. The criterion of seriousness of the anomaly is implied by the environment, or *milieu*[63], where

[60] I.e. there is always certain number of anomalies that are to be find among population. The existence of anomalies as such is common after all nothing exceptional.

[61] Goldstein, 1939, p. 436.

[62] Ibid., p. 435.

[63] Milieu is an original French term composed from prefix *mi-* and a word *lieu* meaning ‚a place'. The prefix mi- indicates that something is in the middle or in the centre for example mi-temps (half time) mi-février (middle of February), etc.

the seriousness is proven by activity, i.e. that some actions, functions and movements of the organism are limited. Also the fourth criterion from the previous chapter – harmful or disturbing influence on the exercise – presupposes an environment where the action takes place. The theory of adaptation based on the level of fitness of a living being always considers the organism in a certain environment. The theory of natural selection also features the notion of environment embodied in its foundations. This notion is contrary to the concept of genetic selection, which represents the random combination typical for genetics. The results of the genetic selection are random and the probabilities of random cases can be described by laws of genetics based on the laws of probability.[64] The environment, or milieu, is one of the most influential biological elements and its importance considerably increased in the history of biology. Its influence modifies the randomness of the genetic drift and organisms undertake constant tests to find the most vital elements for current situation. The term milieu was adopted by biology from mechanics.

Canguilhem analysed the history of the notion in detail and summarized it in the chapter dedicated to the role of environment in the *Knowledge of Life*.[65] The mechanistic notion of the term can be found in Newton and the term "milieu" also appears in *Encyclopedia* by Alembert and Diderot. Patiently tracing the history of the term, Canguilhem concludes that it was coined by Lamarck, and was expanded by Taine to encompass the universal and abstract meanings. Originally it was Newton who borrowed the term from mechanics and used it in biology to solve problems in illumination and also to describe physiological phenomena of vision as well as the physiological effect of the sensation of light, i.e. reaction in the form of muscular motion.[66] Comte explicitly used the term to describe not only "the fluid in which a body is immersed,"[67] but the "total ensemble of exterior circumstances necessary for the existence of each organism."[68] The meaning of the term shifted from the mechanical composition of inanimate objects to a much more dynamic world full of things with different values for an organism.[69] The milieu of an organism reveals itself in the form of field of various options with different values.

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[64] See also Sachse, 2011, p. 39.

[65] .Canguilhem, 2008, 5th chapter.

[66] Canguilhem, 2008, p. 100.

[67] By this he confirms the mechanistic origins as for Newton the original milieu was fluid.

[68] Comte, *Cours de philosophie positive, 40 leçon* cit. in. Canguilhem, 2008, p. 101.

[69] The world of values means that for each organism, the world is equipped with things that are valued differently. Something is nutrition, or potential partner that has positive value for the organism. The organism also perceives such things as positive. Other things represent potential threat or injury and so the organism perceive them as negative and tries to avoid them.

The two centres of the milieu are organism and the external conditions that constitutes the other pole of the milieu. The mi-lieu in this sense is the space between these centres, it is an arena where the centres meet and influence one another, it is the field of norms that form and define the character of the milieu. However, the conception of one centre of the milieu tends to lose its proper relative meaning. Milieu is a medium between two centres and when we consider the body separately as an entity receiving actions transmitted by the milieu we tend to understand it as an absolute term. As much as the very nature the milieu is relative, at the same time it is a foundation, a source of impulses that forces all the living beings to adapt accordingly and moreover, it is at the same time being shaped by all life processes that perform constant small changes causing continuous modifications of the milieu. Goldstein characterizes the relation between milieu and the organism as a sort of conversation[70] where life brings its proper norms and judgements of situations and dominates the milieu, but is at the same subject to it.

Two conceptions of the milieu were dominant in the nineteenth century. One was based on the ideas of Lamarck and the latter originated from the Darwinian conception of evolution. Lamarck's conception is based on the intermediary role of needs. The milieu is described as a field of vital values where living beings take part in the evolution by their life choices. The milieu represents surroundings endowed with different values and by choosing from the most beneficial options a living being becomes subject to the environment. Circumstances change continuously and the living being must be prepared to catch up with them before they are discarded by its milieu. In this respect, Lamarck represents vitalism because he presupposes the originality of life which the milieu does not account for and which it ignores, thus being truly exterior, foreign and separate from life. In biological theory, according to Canguilhem, vitalism and mechanism confront on another on the problem of structures and functions; discontinuity and continuity on the problem of succession of forms; preformation and epigenesis on the problem of development of a being; atomicity and totality on the problem of individuality.

> If vitalism translates a permanent exigency of life within the living, mechanism translates a permanent attitude of the living human toward life.[71]

In Darwinism, the most important biological relation was the relation of one living being to others. Darwin sees the genesis of new forms formed by two mechanisms – one producing

[70] Goldstein uses the expression *Auseinandersetzung* that means an argument, or fight but and etymologically reminds that it is an encounter when one of the member comes out of the other and against it. In Canguilhem, 2008, p. 113.

[71] Canguilhem, 2008, p. 62

differences and varieties and the other reducing and testing them, the natural selection. According to Darwin, the principal relation for a living being is not the relation with the environment, which is understood as the collection of physical forces, but the relation with other living beings. Other beings represent allies, enemies, prey or predators and it is precisely here that the anomalies and morphological individualities become crucial advantages or disadvantages. For Darwin, to survive and to live is a process of submitting an individual difference to the selection from the ensemble of living things and there are only two possible scenarios: either death or becoming part of the selection process. Being alive means to test and to be tested at same time.

According to Canguilhem, Lamarck understood the life from the durational point of view while Darwin sees the life from the perspective of interdependence of living beings.[72] It could be added that Lamarck understands life from the perspective of the living being itself, from the view of the organism, and Darwin better explains the environment from the perspective of interrelatedness of its members, he captures the continuous and perpetual interaction between the living members of the environment. The depiction of the interaction of active living organism has geographical characteristics and it is therefore understood as a bio-geographical conception of the milieu.

The geographical conception of the milieu enriched it with an essential aspect. Geography often treats complex actions that mutually limit each other where the causes produce effects that consequently modify the causes that gave rise to them. Such phenomenon, quite frequent in geography, is also very characteristic for biology. Canguilhem mentions an example with trade winds. They move surfaced sea water, thus levelling up the cold waters that cause the atmosphere to cool down thus and producing wind. This cycle repeats itself indefinitely. A similar complex relation is observable with geographical aspects of plant evolution:

> Vegetation grows in natural ensembles, in which different species limit each other reciprocally and where, in consequence, each contributes to creating an equilibrium for the others. The ensemble of these plant species ends up constituting its own milieu. Thus the exchanges between plants and the atmosphere end up creating a sort of vapour screen around the vegetal zone, which limits the effect of radiation, and this cause gives rise to an effect that will in turn slow down the cause, and so on.[73]

[72] Ibid., p. 106.
[73] Ibid., p. 109.

This is a fundamental characterization of the milieu of life. The life expands in a certain milieu as a reaction to the environment. It strives and develops with omnipresent interaction among fellow life forms. When the expansion of the species grows extensively, it will sooner or later modify back again the environment. Life forms are then challenged to adapt to the new conditions of the milieu that is constantly modified by the actions of the organisms that live there. This fundamental dynamism between the organism and the environment is a constant challenge to all living forms that test the vital capacity of the species and also from the perspective of an individual.

When concerning human beings in particular, the relationship with milieu is more complex. Thanks to the deliberative thinking, the relationship with the milieu is not purely reflexive. The milieu is here as a problem that can be solved by several means. Or we could say that the milieu always offers more solutions, more ways how to deal with current situations. Furthermore, man also has the ability to turn the obstacles to the means of action. The milieu of man is thus endowed with values based on what is desirable. Moreover, human becomes a "geographical factor"[74], in the sense that it lives in an artificial milieu which was entirely constructed by his human predecessors. Through his activities man fundamentally changes the geographical conditions. The relation between organism and milieu now becomes quite reversed compared to what was originally considered. It is no longer unilateral. On the contrary, the relation between milieu and organism is mutual: the milieu forms the organism and the milieu is formed intentionally or subconsciously by the organisms that originated in the milieu. While the milieu was originally comprised as a source of external influence for an organism, now it is shaped by the organisms' activity. In this context, Canguilhem reminds us of Von Üxküll and Goldstein who both emphasized the importance of the relationship between the organism and its milieu. They both understood that experimental conditions were imposed upon a living being, and also realized that a living being composes its milieu.

Von Üxküll uses three different expressions for the milieu, while each of them refers to a different aspect: *Umwelt*, *Umgebung* and *Welt*. The distinction between these three is clear and certainly helps to understand the nature of the relation between milieu and organism. *Umwelt* refers to a milieu of the behaviour proper to a certain organism. *Umgebung* is simply geographical environment. *Welt* is the scientific perspective of the milieu, world of physics and chemistry. The *Umwelt* is the milieu where life takes place. It is a universe composed of stimuli that possess a value for the agent. This milieu is subject-oriented, the excitation comes from the

[74] Ibid.

subject and if the subject is not oriented towards the excitation on the basis of its interest, the excitation cannot be effective. *Umwelt* is the elective extraction of *Umgebung* from the perspective of an individual. Or perhaps it is more explanatory to say that *Umgebung is* the totality of all *Umwelten* of all individuals. For *Umgebung* is founded in *Umwelt,* it is therefore preliminary structured, primarily oriented and centred around some individual. François Armengaud confirms the preliminary orientation of the environment as a necessary condition.[75] A stimulus needs a certain anticipation in the organism, so it can act as an excitation. If the organism does not search for stimuli, there cannot be any stimulus perceived. A living being is not a machine which responds to movements and excitations. An excursion to Üxküll helps Canguilhem to present his own concept of environment that relativizes the limits of individuality:

> From the biological point of view, one must understand that the relationship between the organism and the environment is the same as that between the parts and the whole of an organism. The individuality of the living does not stop at its ectodermic borders any more than it begins at the cell. The biological relationship between the being and its milieu is a functional relationship, and thereby a mobile one; its terms successively exchange roles. The cell is a milieu for intracellular elements; it itself lives in an interior milieu, which is sometimes on the scale of the organ and sometimes of the organism; the organism itself lives in a milieu that, in a certain fashion, is to the organism what the organism is to its components.[76]

This view is far from a mechanistic concept of clueless automatons. An organism is in constant contact with its milieu, organism becomes even unified with its milieu, there is constant exchange of stimuli and reactions. In this concept the individuality is a sort of flexible normativity. This interpretation is close to the theory of Goldstein, which presents the relation to the milieu as a debate (*Auseinandersetzung*).[77] In this debate, a living being comes up with own proper norms of appreciation of the situation. These norms dominate the milieu and accommodate itself to it. This relation, however, does not essentially consist in a struggle. The struggle, or opposition is there in pathological state. A healthy state is in flection, adaptability,

[75] Armengaud, F. „George Canguilhem : le comportement comme « allure de la vie », in Burgat, F. (2010). *Penser le comportement animal*. Versailles, France: Editions Quæ., p. 160.
[76] Canguilhem, 2008, p. 111.
[77] Ibid., p. 113.

and smoothness. Goldstein's conception of health was an important source of inspiration for Canguilhem's own conception, which will be shown in the next chapter.

4. Health and The Normal

This chapter will focus on the treatment of normality with regard to health and healthy behaviour. What is ‘health’ and what does it mean to be healthy? Are the concepts of health and 'the normal analogous?' Is stating that someone or something is healthy a factual statement or a normative concept? Is the abnormal the same as the pathological? Is the pathological purely negative or does it have any positive effects? What is the relation between health, the normal and norms? Is health subjected to some sort of norm that could even be arbitrary? Is health a similar concept to the laws of physics which are to be recognized, described or is it rather something that can be a subject of agreement and is therefore at least partially arbitrary? This is just a sample of questions that can come to mind when attempting to understand the two notions: health and the normal are concerned together. From these questions alone we can infer that there are several levels on which both terms can be considered. For the sake of clarity, the questions will be divided into several topics and dealt with separately. Starting with the questions about pathology, we will first analyse what is not healthy and what is its relation to the normal, abnormal and the norm. Then we will compare what is considered to be healthy with the analysis of the normal from the previous chapters. Finally, we will try to elaborate the concept of health and how the health should be regarded which includes the treatment of the pathological. We will again turn to the work of George Canguilhem and Kurt Goldstein. We will also mention Hans-Georg Gadamer in the context of epistemological aspects of health and the pathological. The important part of the chapter will be dedicated to the clarification of the pathological compared to the normal. The explanation of the pathological will be based on the critique of the rigid conception of normality presented by the positivist view and the view of experimental biologist, Claude Bernard. We will also shortly talk about the scientific approximation of normality – a concept of ‘normal’ man. Guillaume Le Blanc, who dedicated many texts to the topic of norms and is a commentator of Canguilhem and Foucault points out the importance of this conception for the advancement of natural and social sciences. At the end of the chapter, the definition of health will be presented as a healthy state as proposed by Canguilhem following the ideas of Goldstein.

4.1. The Pathological and The Abnormal

If we browse through the questions set out at the beginning of this chapter, perhaps we will notice that there is an important problem that links many of the questions together. It is the relation between the normal and health and the question whether these two are identical or not. It is obvious that health is a term of value, it is a positive term with normative consequences. The clarification of the relation between the normal, normativity and health will help us to understand the concept of health as a natural state of the organism and its milieu.

I approached the questions about health by first discuss in the pathological, which may appear as a retreat from the problem. However, it is a recognized way of learning more about health and it is the common vantage point of starting to think about health as a whole. In fact, by approaching the issue through negativity is a concept that Canguilhem borrows from his mentor Gaston Bachelard. In the article '*Vie*'[78] in *Encyclopaedia universalis* Bachelard describes the statement that life is experienced only in the errors and thus manifest its substance vicariously. As Macherey points out, the life then becomes most apparent in the moment of a stumble, whenever it reaches and bounces from its limits that one is drawn to explore.[79] Often, only after we become ill or injured, or we are to be medically treated, this is the time when we start to think seriously about health and we realize that we have taken it for granted so much and were not thinking about it as something special. Canguilhem was clearly inspired by Bachelard in the concept of the negative value and understands his own studies in pathological and abnormality as the correct way to study life in its forms, i.e. by studying primarily the negative aspects and forms that threaten the existence of a concrete life of an individual. It is always the life of the individual that is in the centre of interest for Canguilhem.

In the vulgar sense, to be healthy is normal, it is the normal state. If not stated otherwise, it is considered the original state when talking about a person. It is only when we become sick or injured, we suddenly start to perceive an obstacle or discomfort during an activity that was previously smooth and easy. We also start to feel the painful area with greater intensity, which draws a lot of our attention to the area on or inside the body which was previously totally unnoticed. Gadamer differs from Canguilhem in important points. For example, Gadamer calls illness a 'revolt' or 'rebellion'[80]: some obstacle (*Gegenstand)* which prevents proper functioning of some vital function. And he adds that we have so far acquired a lot of means

[78] Bachelard, Gaston, „Vie" in *Encyclopaedia universalis*, cit. in Macherey, 2009, p. 98
[79] Macherey, 2009, p. 99.
[80] Gadamer, Hans-Georg, (1996) The Enigma of Health, trans. Jason Geiger Walker and Nicolas Walker. Stanford: Stanford University Press, p. 96.

how to identify, examine closely and value its effect, but health somehow escapes all this examination. So health is not something that is recognized as such but it "manifests itself precisely by virtue of escaping our attention."[81] It is in the nature of health to escape our attention, to be unnoticed when fully present and it comes to mind especially in contrast with an illness, the state of health is therefore a sort of blessed ignorance. By not perceiving any pain or obstacle we experience the state of health as sort of non-experience of pain. However, it is not actually a negative state of non-existence. Relief from pain and illness is actually a very fulfilling, pleasant and positive feeling. Epicurus considered the feeling when the body is relieved from pain as the highest of pleasures.[82] It is a time when the health is being recovered. Gadamer's concept of health shares the presumption that health cannot be measured for it is a condition of inner accord. Gadamer similarly to Canguilhem, advocates for the perspective of the patient. The 'condition of inner accord'[83] is the reason why it is meaningful, according to Gadamer, to ask patient how he or she feels. Only the patient alone can recognize the inner accord. However, Gadamer still understands the disease solely as a disruption of the inner harmony. Canguilhem on the other hand emphasizes the concept of disease that it is a challenge of adaptation to the radically new and limited environment or conditions. It is an attempt to restore the normative capacity as much as possible in a different milieu.

It becomes clear that health cannot be experienced without sickness or pain for it is understood as its opposite. Nevertheless, being healthy is not a derivative state that would need to be understood only as a reduction or privation of another state of being. Although apparently it seems easier to define an illness as a form of pathological state than to define the disease as such. The complexity is that "the borderline between the normal and pathological for several individuals is imprecise, but it is perfectly precise for one and the same individual when considered simultaneously."[84] There are two levels on which the pathological can be understood. On the level of multiple individuals, in such case one is concerned with the pathology as such, and on the level of a single individual we are concerned with the state and health from the perspective of the individual. The former analyses the impacts, consequences and manifestations and the latter perspective deals with the suffering of the patient, how does it disturb the life of the sick, how impaired was the health. The latter is formative of the subjective description of the patient. Sickness is felt by the patient as something that causes

[81] Ibid.
[82] Long, A.A., (2006) *From Epicurus to Epictetus*, New York: Oxford University Press, p. 179
[83] Gadamer, 1996, p. 108.
[84] Canguilhem, 1989, p. 182.

obstacles, set limits and hinders in the life processes that were previously possible. The difference between both the perspectives is important – one becomes the main source of information for the other. Pathology is always felt as an obstacle for an *individual*. The evidence of one's actually perceived state of health plays the pivotal role in making a judgement of a pathological state.[85] It is a common occurrence that a certain body condition is classified as pathological according to what is statistically normal. Canguilhem presents a widely known fact that Napoleon had a pulse 40 beats per minute, which is way below the average rate, which is 70 beats per minute. At that time, this pulse rate was considered the healthiest. This model example suggests that a pathological state is pathological only when it is perceived as such by the affected subject. The norm that separates the pathological from the healthy must not result from the average but must be based on the conditions of the examined individual. The difference between health and the pathological is always to be considered with regard to an individual. What is normal for one organism in its milieu can be considered pathological for it in a different milieu.

From the previous description of the pathological we can observe some vagueness in the concept. Sometimes, despite all symptoms indicative of a pathological state, a subject can perform all the usual and sometimes even unusual tasks that his fellow organisms are able to perform and also feels perfectly healthy. The concept of pathology becomes seemingly imprecise, casuistic and merely descriptive. We must use the same principle here we already introduced when we classified different types of anomalies. Here again to judge a certain phenomenon as pathological one must consider such a phenomenon with regard to the fact how it affects the conditions of life for an organism in his milieu. Are they neutral or do they diminish or even limit the options of an organism? Or do they surprisingly enhance its capabilities? Pathology can be identified only by applying the overall point of view concerning the individual organism in its milieu. All physiological information (blood pulse, heart rate, body temperature, etc.) are but statistical data that can draw our attention and lead

us to examine obvious statistical exceptions, however, alone they are not sufficient for identifying a pathological state. Canguilhem expresses clearly this idea with regard to the normativity of an organism.

[85] That is why there also exists the right and the option to immediately end a medical treatment against all medical advice and request and discharge oneself from a hospital. (Of course with the obvious exception for those patients who are mentally unstable and potentially dangerous to others.)

> There is no fact which is normal or pathological by itself. An anomaly or a mutation is not in itself pathological. These two express other possible norms of life. If these norms are inferior to specific earlier norms in terms of stability, fecundity, variability, they will be called pathological. If these norms in the same environment should turn out to be equivalent, or in other environment, superior, they will be called normal. Their normality will come from their normativity. The pathological is not the absence of a biological norm: it is another norm but one which is, comparatively speaking, pushed aside by life.[86]

A thin line is drawn between the pathological and health. Up to a certain point they act in a similar manner, they are 'possible norms of life'. In other words, they both guide and limit the way through certain options and faculties – each of them is a specific set of norms that guide an organism in his life choices. Thus the pathological nature is revealed in the interaction or struggle with the environment. The norms that proved themselves stable, fecund and variable enough to maintain an organism and his offspring vital, are considered normal and healthy.

Although usually the opposition is conceived between the pathological and the normal it would actually be more proper to talk about the opposition between the pathological and the healthy. We have seen that the normal can be perceived as an ambiguous concept because only one of its meaning is judgemental and the other is factual, statistical. The opposite, on the contrary, pathological, is a purely negative term. It is not based on statistics: it is a negative state of discomfort or damage, an obstacle that prevents certain actions of an organism. This perspective is completely lacking in the work of Foucault. Foucault extensively studied the history and development of the pathological from the sociological perspective. However, he never really approached the problem of the pathological from the perspective of the patient who suffers the unpleasant state of disease, of discomfort of damage. The perspective of the patient, which is a sort of phenomenology of the disease is shared by Goldstein and Canguilhem. From this comparison, Foucault does not offer the conception of disease. He merely traces its social status. The understanding and explanation of a disease by Canguilhem and Goldstein therefore seem much more accurate and explanatory, whereas Foucault's concept is not satisfactory. In fact, Foucault does not treat the disease *per se*.

The opposite of the 'pathological' is 'healthy' and not 'normal' for the relation between normal and pathological is more complicated as there are two meanings of normal. However, when Canguilhem uses the term 'normal' in the apparent opposition to the term 'pathological' it refers to health and (sometimes explicitly) to the normative sense of the normal. This means

[86] Ibid., p. 144.

that the pathological is something not viable, a false attempt of a single life form that is not to be followed. The pathological is a norm that is not strong enough to establish itself in the competition of other norms. Therefore, later Canguilhem describes the conception of the pathological in detail:

> As a consequence, we must say that the pathological or abnormal state does not consist in the absence of every norm. Disease is still a norm of life but it is an inferior norm in the sense that it tolerates no deviation from the conditions in which it is valid, incapable of as it is of changing itself into another norm. The sick living being is normalized in well-defined conditions of existence and has lost his normative capacity, the capacity to establish other norms in other conditions.[87]

One of the main goals of Canguilhem's work is to demonstrate that pathology cannot be simply understood as an absence of a norm. A pathological state is one of the norms of life, and so it should be considered not just a privacy from another norm, a pathological state is a sort of norm of its own that limits the normative capacity of the sick living being. However, identification of a disease as a pathological state, although it occurs always on the level of the individual, is not totally arbitrary according to the temporary state of mind of the examined subject. The pathological in fact *limits*, even *prevents* the establishment of other norms. The inferior norm of pathological state does not allow any deviation from the conditions in which it is valid. It means that the inferior, pathological, norms limit the vital normativity of healthy organism. Suddenly, in a pathological state, the number of possibilities is limited. This also explains the phenomenon why we feel so suppressed by a disease. When sick, we are suddenly not able to perceive and to think about much else than the disease itself. This is the consequence of the fact that the normative capacity has been limited and new, unfamiliar norms are being established. This is the consequence of the fact that the normative capacity has been limited and new, unfamiliar norms have to be established. These are the only ones that are possible in the limited milieu. In this context Canguilhem talks about the opposition of normalization and normativity. The normalization – adaptation to the limited possibilities due to the disease – is a contrary to the vital, healthy normativity – capacity to introduce various norms.

Such a concept of disease is very distant from the positivist conception of Comte and also from the ideas of Claude Bernard. Disease becomes a positive (in the sense of non-derivative), innovative experience in the living being. It is not just a decrease or increase of some component

[87] Ibid., p. 183.

of the healthy state. Therefore, the pathological state cannot be deduced from the content of health. Therefore, disease is not a variation on the dimension of health. Disease is a new dimension of life.[88] Canguilhem's conception of the pathological was largely inspired by the explanation of Goldstein:

> Pathological phenomena are the expression of the fact that the normal relationships between organism and environment have been changed through a change of the organism, and that thereby many things which had been adequate for the normal organism are no longer adequate for the modified organism.
>
> Disease is shock and danger for existence. Thus a definition of disease requires a *conception of the individual nature as a starting point.* Disease appears when an organism is changed in such a way that, though in its proper, 'normal' milieu, it suffers catastrophic reaction. This manifests itself not only in specific disturbances of performance, corresponding to the locus of the defect, but in quite general disturbances because, as we have seen, disordered behaviour in any field coincides always with more or less disordered behaviour of the whole organism.[89]

In Goldstein's explanation we can find many important points that later appear in Canguilhem. Primarily, it is the idea that pathological phenomena interfere with the relationship between an organism and the environment. The pathological is not simply a modification of the organization of an organism, as was thought by Claude Bernard, it manifests itself as a shocking and dangerous change between the organism and its environment. Disease is strictly defined as a threat to the existence. Although Canguilhem talks about a 'positive and innovative' experience, he does not mean that pathology would be a desirable or preferable state. The positivity of the pathological is not that it would bring benefit for the being, positivity in this case means that the pathological state produces its own norms, that modify the life of the individual in its own unique way. The modification cannot be derived from the state of health.

Another important idea that Canguilhem borrows from Goldstein is that the pathological always needs to take into account the perspective of an individual being. The typical feature is that the pathological does not manifest itself only locally in place of the defect. It is rather a *general disturbance* because it influences the behaviour of the whole organism, as the whole organism is forced to adapt and overcome or get used to the new state that brings disorder to

[88] Ibid., p. 186.
[89] Goldstein, 1939, p. 46.

the original arrangement. The aspect of individual perspective is an important feature of the definition of health. This perspective determines a disease as pathological, as a negative element of life. Only from this perspective can be diseased understood as a sorrow in life. From the perspective of population, society or just multiple individuals, a disease is a regular phenomenon that is part of life of the group. From this perspective the pathological is a necessary phenomenon that is part of the society, cannot be completely cured and thus has to be studied, classified and treated. In project of Michel Foucault, the subjective perspective of individual suffering is put aside as non-relevant, whereas the pathological is comprised as a common social phenomenon. It classifies all the individuals as patients/non-patients. When the number of patients is under certain (arbitrary) limit, the pathological phenomenon is under control and thus normal and not pathological as a whole. Foucault depicts the historical normalization of the abnormal by tracing the evolution of criteria of normalcy and treatment of the abnormal.

4.2. The Normal Man

The present chapter will carry out a minor investigation into the epistemic role of normality and its importance for the development human sciences. When the expression 'normal person' is used by natural and social sciences, it is usually because they talk about some characteristics or phenomena that are typical for a human being. The term normal is here complementary with the concept abnormal. The purpose of the classification normal/abnormal is to differentiate between everyone for two main reasons: (1) there is a knowledge about all individual phenomena if they are normal or abnormal and on the basis of it the very classification can be obtained as well as maintained and (2) every individual submits to the classification so there are no instances of unidentifiable individuals. Every individual is thus integrated in the society as its part with his or her proper place in it.

Guillaume Le Blanc, an author of recent studies about norms, Canguilhem and Foucault, in his book *L'esprit des sciences humaines* presents the positivist standpoint, namely from Quetelet and Comte. Le Blanc confirms that the ultimate goal of positivism is to capture human normality.[90] Comte thinks that 'normal man' is a concept that can overcome individual differences that complicate the scientific research of man. Thanks to biology and sociology – two sciences considering man from different, yet complementary aspects – we are able to order

[90] Blanc, 2005, p. 166.

systematically our special knowledge of the individual nature of ourselves.[91] Comte's contemporary, Adolphe Quetelet, understands a normal man simply as the average of possible variations. This conception would be used to regulate the development of individuals and of the society on the basis of the average of variations. According to Quetelet, an average man is an aggregate of averages based on the series of variations proper for every human physical and mental phenomenon. Such conception of a normal man presupposes the maximum of possible observations so that the corresponding normal type can be determined. The normal man is here identical with the average man as both are fictional concepts that include all possible variations in a certain environment. Quetelet describes the normal man as follows:

> The man that I consider here is situated in a society in analogy with the centre of gravity in bodies; it is the average with oscillating social elements. It would be, if we like, a fictional being for which all the things are in accordance with average results obtained for society. If we try to establish in a certain way the foundations of *social physics*, we must consider such figure so we do not stop ourselves at particularities and anomalies.[92]

This conception of normal man helped to authorize research in history, biology, geography and sociology. Thanks to the conception of average man, different phenomenal variations could have been studied. Quetelet points out that the concept of average man is crucial for medical science, as it is important always to compare the treated individual to this fictive being that is considered normal (i.e. desirable) and attaining the state of average man is the aim of medical treatment.[93] Although Quetelet develops the conception of normal man in order to study variations and particularities, when he describes the work of a doctor he does not present it as a simple comparison between the patient and the ideal normal or healthy man. When a doctor finds out that the pulse is too accelerated and the respiration is too agitated, the doctor does not conclude that the patient is ill because of the state of physical indicators such as pulse and respiration, but rather the other way around: the measured results indicate the pathological state because of their harmful effects on the patients and not because they differ from the average exemplary indicators.[94] Consequently, Quetelet encounters a problem: What are the limits of the normal. He concludes by suggesting the importance of medicine of healthy people so the normal state of individuals could be studied which would help to understand the

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[91] Comte, A., *Système do politique positive, op. cit.,* t. II, p. 442 cit in Blanc, 2005, p. 165.

[92] Quetelet, Adolphe, (1835) *Sur L'Homme et le développement de ses facultés ou essai de physique sociale*, p. 44 cit in Blanc, 2005, p. 168.

[93] Quetelet, 1835, p. 46 cit in Blanc, 2005, p. 169.

[94] Blanc, 2005, p. 170.

pathological state. This line of thought shows that when the pathological is not defined by a certain set of criteria that can be expressed in quantity and it is experienced as a state of discomfort and is harmful to the patient, the question of what is a healthy state becomes central and is not that easy to answer. The problem of the pathological is then reversed, as the diagnosis of the pathological becomes very easy due to the fact that it is based on the personal feeling of the patient. The problem becomes not the pathological, as this is easily known, but the healthy instead. How are we to define health and where are the limits of healthy state of living being? This enquiry about health does not seem very effective. On the contrary, it ignores the differences of individuals and does not reach the essence of health at all. This approach therefore confirms the method of Canguilhem and Bachelard and the interest in the negative elements – pathological – where the health can be expressed in contrast to the pathological.

Le Blanc sums up the conception of normal man: The philosophy of the average man is the philosophy of a struggle against variations for the benefit of the type in its most common regularity. It means that the negativity of illness, of monstrosity, of defectiveness, must be fought over with regard to the restoration of the positivity of normality.

> The philosophy of an average man is a philosophy of a struggle against variations in the sake of the type in its most common regularity.[95]

Quetelet gives an example of crime rate. It is normal for every society has to face a certain level of crime. Therefore, the conception of normality does not aim to eradicate the crime completely from the society. Its aim is to find out what level of crime is normal and then keep the crime rate with this normal rate. So in this case, the pathological crime rate would represent a state when the normal crime rate would be exceeded.

The concept of normal or average man and its usage may bring advantages to the scientific studies about man, but in the end it tends to eliminate variety and to accept the statistical average as the proper object of study. The pathological is absorbed by the society and a certain level of pathological is accepted as normal and appropriate. This aspect is analysed by Foucault who described in detail this process of absorption. He describes the origin of institutions that treat pathological in various domains (e.g. physical and mental health, criminality, education, sexuality). These institutions by defining the limits of normal and abnormal, and treating the abnormal, absorb the abnormal in the society. Being kept interned and physically separated from the rest of the society, the abnormal is part of the society. The abnormal is included in the

[95] Ibid.

society by reserving a special space where abnormal is interned. The society absorbs the abnormal as its necessary part, though physically separated, still inseparable from the society as a whole. The evolution of the applied conception of normality is what interest Foucault in his work.

Here comes the importance of Canguilhem's concept, that understands pathological from the perspective of a patient for whom the pathological cannot be translated as normal. The pathological force the patient to face new challenges in a new environment that is a limitation compared to the previous state. An analogous perspective of a crime would be the one of the victim of a crime. For the victim a crime cannot be never understood as normal, as socially acceptable. For a victim the crime is always a violation of victim's freedom and cannot be understood as normal and acceptable.

4.3. Healthy Normativity

We have already established that the normal and healthy are considered equal in the common sense. We have also repeatedly talked about the normal as the opposite of the pathological. There are a few reasons why it is inaccurate to understand the normal as the healthy. What is the difference then between the healthy and the normal if they are sometimes used as synonyms? First of all, there is the problem of the exact sense of the normal. We made a difference between the normal as the normative ideal or as the statistical average: The normal is not the strict opposite of pathological in neither of the two meanings. Following Canguilhem, we mentioned that the pathological state is not a complete lack of norm. It is rather a state of an organism when it is a subject of different norms than in a healthy state. The pathological state does not mean that there is a complete lack of normativity, the normativity is rather limited or changed. Hence the normal (in the normative sense) is not the opposite of the pathological.[96] If we consider the normal in the statistical sense, it cannot be understood as the opposite of pathological either. Pathological states are quite common in the population as well as for every single individual and so the pathological state is, statistically speaking, quite a common, regularly and currently appearing phenomenon. From this point of view, the pathological state is something normal pertaining to organisms.

Nevertheless, we have also added the third meaning of the normal, as natural conformity to the environment. The pathological can be understood as completely contrary the normal only

[96] This norm of a pathological state is for example that if we have a flu, we need to rest, stay warm and drink enough fluids. Of course there are countless individual modifications of how people deal with the flu. Hence the normativity is just limited but still present.

in this sense. An individual decides for himself what is normal for him, he does not rely on statistical evidence, he does not consider normality from the normative point of view as an ideal that is to be established. The normal for an individual is here an untroubled state that provides possibilities for the individual to act in the compliance with his environment. The pathological interrupts this harmony between the individual and the environment. The individual perceives the pathological as not normal, while, on the contrary, the pathological disrupts the established relations with the environment and is perceived as something that should be removed or overcome. The pathological is an opposite of individual normality, and challenges the individual to find a new balance in the pathological state and introduce a new normal state in current conditions.

Canguilhem argues[97] that the 'normal' does not have any absolute or substantial significance. Neither a living being, nor the milieu can be classified as normal when considered separately. Only when we take both of them into account, can we decide whether one is normal in relation to the other. The objection could be raised that by introducing the individual meaning of the normal we try to eliminate the difference between the normal and pathological. The argument would be the following: by stating that what is pathological for an individual is not pathological for another individual we could simply conclude that there isn't any real difference between the pathological and healthy as it is purely relative. Canguilhem agrees with this argument insofar as numerous individuals are taken into account. Indeed, what is pathological is relative to each individual and cannot be stated absolutely. Nevertheless, for a single individual the difference between the pathological and healthy is absolute.

> If what is normal here can be pathological there, it is tempting to conclude that there is no boundary between the normal and the pathological. Fine – if by this we mean that from one individual to the next the relativity of the normal is the rule. But this does not mean that for a given individual the distinction is not absolute. When an individual begins to feel sick, to call himself sick, to comport himself as a sick man, he has passed into different universe and become a different man. The relativity of the normal must in no way encourage the physician, in confusion, to nullify the distinction between the normal and the pathological.[98]

The pathological state of an individual is not relative and not simply deductible from physiological data. The pathological state is a *phenomenal state* that is felt by the patient whose

[97] Canguilhem, 2008, p. 127.
[98] Ibid., p. 130.

normativity had been reduced and impaired. This position is to be understood as the opposition of the positivist tradition, represented by A. Comte and F. Broussais, which was still adopted by Claude Bernard, who describes the pathological state as homogenous with the state of health only quantitatively different from the normal state. It is exactly this subjectivity that has an absolute value or, as Canguilhem says, 'universal subjectivity'[99] that defines the pathological and disease as well. The universality of subjectivity is proven by the fact that medicine exists as an established scientific technique which aims to cure diseases as much as possible. The existence of medicine testifies to the fact that it is evident that illness is considered undesirable and is actively prevented if possible. Although Foucault does not deal with the pathological from the point of view of universal subjectivity – from the phenomenological perspective – he follows rather a positivist path and tracks the origins of clinical medicine with accuracy and precision of a historian.[100] Still he confirms the precedence of the pathological behaviour that was excluded from the society at first, then interned without any special treatment and afterwards together with more subtle classification of the pathological a special treatment was applied for criminals and for interns that were classified as mentally ill.

During the detailed examination of a pathological phenomenon in its anatomical and physiological aspects, often the pathological and the normal seem to appear as a quantitative variation of a certain physiological criterion. This was also the theme of research of Claude Bernard who deserves merits for coining the methodology of biological experimentation. Nevertheless, from the perspective of a conductor of biological experiments it is a comprehensible approach to view pathological states purely as deviation from average data. Although this view can be useful for pedagogical purpose, from the theoretical and practical view it is problematic. Taken as whole, the ill organism is different from the healthy one. The illness is a complex phenomenon that influences the life forces in a very subtle way and the reactions of the sick organism are more likely a new physiology than a modification of the original physiological organisation. Canguilhem with this idea is a successor of Goldstein who argued that a pathological is a completely different state rather than a modification of a normal state. Goldstein criticised in detail the mechanistic theory of reflexes being isolated relations between isolated organs and pointed out that an organism is active as a whole and thinking about human beings as a result of reflexive behaviour is incorrect. Hence an important thesis that 'any change in one locality is accompanied by a change in other localities' and that 'wider

[99] Ibid., p. 132
[100] Foucault, Michel, *Discipline and Punish* and especially in *Madness and Civilization.*

areas, indeed the whole organism, always participate in any reaction' and finally: 'With any change in one locality in the organism, simultaneous changes occur in other localities.'[101] This is what Canguilhem means when he talks about a different organism in pathological state comparing to a healthy organism: "Considered in its entirety, an organism is "other" when it is diseased and not the same save for certain dimensions. The goal is to comprise a pathological state as unique, peculiar, other and not as a mere limitation or reduction of the state of health.

We have argued why the normal should not be understood as the contrary of the pathological. The normal is not the logical opposite of pathological for the pathological can be viewed as normal from the statistical and normative point of view. The pathological is not the absence or opposition of norms – it is a presence of a different (diminished) norms instead. Therefore, the 'pathological' has the vital contrary in 'healthy' rather than logical contrary in 'normal'. Canguilhem presents this logical analysis of the term pathological and he continues with a positive definition of health.[102] He reminds Goldstein again who described the life as 'shrunken' milieu that differs qualitatively, structurally, from its former milieu of life.

> The organism is obliged by its incapacity to confront the demands of new milieus (in the form of reactions or undertakings dictated by new situations) to live exclusively in this shrunken milieu. Now, to live, already for animals and even more so for man, is not merely to vegetate and conserve oneself. It is to confront risks and to triumph over them. Especially in man, health is precisely a certain latitude, a certain play in the norms of life and behaviour. What characterizes health is a capacity to tolerate variations in norms on which only the stability of situations and milieus – seemingly guaranteed yet in fact always necessarily precarious – confers a deceptive value of definitive normalcy. Man is truly healthy only when he is capable of several norms, when he is more than normal.[103]

This definition is an implicit reaction to the definitions of health based on a mechanistic view with the physiological indicators based on the criteria of normalcy. In this conception, health is considered as a state that needs to match certain explicit quantitative criteria where deviation from these criteria indicates the pathological. Definition of Canguilhem (and Goldstein) overcomes the conception of quantitative expression of healthy state based on physiology. Being healthy does not mean only that one is able to be normal, that is to be able to follow certain set of norms that are suitable in the current environment. Armengaud describes

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[101] Goldstein, 1939, p. 213.
[102] Canguilhem, 2008, p. 132.
[103] Ibid.

the normativity in Canguilhem's concept. The activity of living being enables it to react originally to new situations. This activity or capacity to face new conditions with originality is what Canguilhem calls normativity.[104] The living being is here understood as a capacity or power. Health is much more than just following a norm, health is characterized by the capacity to tolerate *variations in norms,* which, in the seeming stability of the environment and current situation, constitute the transitive normality. For real health one must be able to cope with multiple norms or potential normative systems, to be healthy means to be more than normal. The capacity of adapting to a different and even contrary normative systems is what characterizes health. It is the meaning of healthy state; it is being more than normal.

> The measure of health is a certain capacity to overcome organic crises and to establish a new physiological order, different from the old. Health is the luxury of being able to fall ill and to recover. Every disease is, by contrast, a reduction of the power to overcome others.105

Health is the capacity to overcome organic crises through the introduction of a new physiological system or new parameters to the physiological system. This leads to a paradoxical conclusion that health represents the capacity of being able to fall ill and recover. Canguilhem calls this paradox a luxury of health. The luxury of health is that it comprises its negativity – the pathological without eliminating the health as such. This paradoxical aspect of health is also confirmed by the phenomenon that could be called a 'disease of normalcy'. At the end of *New Reflections* Canguilhem talks about a disease of normal man that happens as a result of normalcy. A disease that arises from the deprivation of diseases, from an existence almost incompatible with disease.[106] Hence, health is a certain compatibility with a disease. There are several well-known phenomena that confirm this theory. For example, a small pox that was much more lethal for American Indians who had never came across it before and so the infection from colonists killed them in numbers although for the colonists themselves it did not cause as much damage by far. Similar case is with the childhood illnesses, for example measles, when the human body by experiencing this disease develops antibody and is immune to it for the entire life. The capacity to get sick and overcome the sickness is characteristic for healthy organism. An organism who overcame or absorbed a disease is much better equipped to confront a disease than an organism who did not encounter it at all.

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[104] Armengaud, 2010, p. 162
[105] Ibid., p.132.
[106] Canguilhem, 1989, p. 286

Canguilhem's definition of health helps us understand how it is possible to consider pathological states normal and abnormal at the same time. It is part of healthy organism to be able to endure pathological states and this ability is the manifestation of health. However, a pathological state is still something that sets inferior norms, diminishes the options of the organism and reduces the environment of the organism. But inasmuch as the pathological is overcome by health, it is a normal ingredient of a healthy organism. A living being is to be considered healthy if it is capable of setting out vital norms by assimilating rules of normality. Normativity of a healthy organism is not reduced to a mere adaptation to a previously given and constant environment, but it is the capacity to integrate itself in the environment through the introduction of new vital norms and thus the ability actively transforms the environment.

5. Society of Norms

In the last part of this thesis, I will present several aspects of what could be called social normativity. So far I have talked about organisms, their way of life, their health, their diseases, the efforts made to overcome them, all these states are determined partially or even fully without any conscious involvement of the individual. The norms in the natural, vital or biological sense are not experienced as norms that are imposed and enforced. Michel Foucault's work will be repeatedly referred to as it provides valuable insight into the functioning of norms in the society. Moreover, Foucault studied the historical development – archaeology – of institutions and classifications that primarily concern vital functions. Thanks to these studies, Foucault was able to clarify how relations of power formed and especially how power is practiced through the norms. The normative power will be shown also in the contrast to the juridical power executed by law. In his work *Discipline and Punish,* Foucault demonstrates how norms helped to overcome an obsolete regime based solely on the explicit statement of the law and persecution of violators of the law. Foucault traces Canguilhem's idea about intrinsic norms that are spontaneously established in order to cope with the environment in the field of social norms. Foucault proves that to see a social norm as a sole result of prescription reached through a deliberative process, which is subsequently applied, does not correspond to the observed reality. On the contrary, social norms are characteristic for their immanent character and productive influence. These aspects are highlighted by Pierre Macherey. As we will see, the productive influence opens new possibilities for individuals to understand themselves and others in the perspective which is produced by a particular norm. The final characterization of norms as both dynamic and polemic applies to both biological and social norms. Although there are a lot of common features on both conceptions – on Canguilhem's normativity and Foucault's normalcy – and Macherey tries to lay emphasis primarily on the similarities and mutual influence between both authors, there is a principal difference regarding the relation of the biological and the social. While Canguilhem mainly focused on the biological and medicinal aspects of the normal and normativity, Foucault tries to disclose natural normative tendencies that evolved in the process of institutionalization of a certain social phenomenon such as illness, mental illness, criminality, sexuality and others. Foucault called this approach archeologic due to the fact that he uncovers the historical evidence about the origin of certain social institutions, where social norms are practiced and formed. On the other hand, Canguilhem's approach could be called phenomenological for his interest in the subjective point of view – perspective of the patient, perspective of a subject rather than the object of a norm.

Ondřej Švec in his article[107] about normativity and normality compares the attitude of Canguilhem and Foucault regarding the relation of social and vital norms. He demonstrates in the article how was Foucault inspired by Canguilhem's work and where are the differences between these two authors. Švec argues that in some cases differences between the authors are more significant than Macherey would like to admit. In the article of Ondřej Švec we can find several important points that will be described in this chapter, such as the power of a norm and productivity and immanence of the norm.

5.1. Vital and Social Normativity

The previous chapter tried to perceive the organism as the originator of normative activity which gradually attains individuality through interactions with the environment – milieu. The capacity of adjusting to the vital norms according to the modifications of the milieu and also the ability to live by a different set of norms is characteristic of a healthy organism. For this capacity, the disease represents an eventual limitation of the milieu together with a limitation of this very capacity. Having a flu limits our possibilities, we are not as strong and fit as usual, and it also limits the normative capacity as we lose the possibility to choose from different activities such as riding a bike, writing a letter, going to work. The normative capacity is limited in options, as we choose from staying in the bed or resting on the sofa, eventually having our tea with or without honey and waiting until we recover. Our health is constantly threatened by pathological instances. But it is the very nature of health to be confronted with the pathological, because health is precisely this capacity to deal with the pathological by establishing such norms that include the pathological in the environment and it is no longer diminished by it. That does not mean that we try to deny the existence of a flu and act like nothing happens, but rather to understand flu as a temporary state of the organism.

In the previous chapters we have talked about biological norms and normativity, about health, similarities and differences between the machine and the organism. These reflections were concluded by a definition of health and the interrelatedness of the term normality, normativity, abnormality, health and the pathological and by explaining why it is not possible to consider the normal and the healthy as equal. When it comes to man and human society, the normative capacity reaches a different level. When we were talking about physical health and the disease we were talking about biological phenomena that were natural, non-reflexive and

[107] Švec, Ondřej (2012) "Normativita života a společenská normalizace (Normativity of Life and Social Normalization)", *Teorie vědy / Theory of Science*.

instinctive. In human society a great importance is reserved to another type of norms that could be called in a broad sense social and are usually characterized as, unlike the biological norms, resulting from a certain level of reflection, they are mostly established after a prior deliberative process and based on a certain argumentation or power.

The position of Canguilhem regarding these two kinds of norms developed significantly. At first, in his doctoral theses published later as a first part of *Normal and Pathological*, he argues for a continuous evolution of social norms on the basis of biological normativity. In his reflections on the problem of normal and pathological some 20 years later, published as the second part of *Normal and Pathological*, Canguilhem seems to lean more towards the idea that as a result of the historical factor of contingency social norms are opposed to vital norms which causes discontinuity between vital and social normativity. The difference between vital and social normativity is not solely based on the fact that social normativity is founded on the reflexive and deliberate activity. According to Canguilhem, the difference also caused by the fact that social normativity is not a result of a spontaneous activity of affected persons but is, from a major part, a conclusion of external influences (political, economical or technical). In this point Foucault disagrees with Canguilhem and demonstrates that also the social norms, up to certain level, result from the spontaneous activity and do not rely completely on the arbitrary determination. Canguilhem's approach aims to demonstrate the distinction between vital normativity, which is organized from within by the intrinsic activity, and social normativity that is imposed by an external source as a norm that reduces multiplicity and irregularity of reality. Vital normativity is defined by the inner requirements of an organism; social normativity is, on the other hand, a conglomerate of diverse intentions. Social norms are a way for the society to deal with the natural diversity of forms and to regulate their antagonistic character. This is what Canguilhem means when he says that normality is not a statistical and pacifistic notion, but a dynamic and polemic one.[108] The polemic factor consists in the constant challenge from other rival normative claims and the dynamic factor represents the interval between the norm and the actual state of the world that the norm itself aims to control. In conclusion, a society is urged to find compromises among different normative forces. Within an organism, these various normative tendencies are unified effortlessly in the individuality of the organism. In a society, however, normativity implies a certain goal that is to be achieved, although it is never fully achievable.

[108] Canguilhem, 1989, p. 239.

To certain extent, Foucault continues in the thought of Canguilhem, he follows his most distinctive idea that norms are intrinsic and self-organizing. However, a great deal of Foucault's work motivated by the effort to overcome the concept of social norms as something that is imposed externally and explicitly by the ruling segment of the society. Foucault's project is to show how the self-organization of the normative activity establishes itself in the course of self-articulation by the subjects and objects of the norm. [109] Pierre Macherey sums up Foucault's insights about norms and normativity in two main perspectives and explains that Foucault chooses one approach in each perspective.[110] One perspective focuses on the relation of the norm to 'the objects' and this relation can be either external – concerning explicit specification (juridical norms) or internal – characterized by intrinsic limitation (vital norms). The other perspective describes the relation of the norm to its subjects that make the normative distinction and divide objects according to the norm into normal or abnormal. Foucault's project consisted in an attempt to understand the social norms also as internal and self-organizing. However, Foucault studies the self-organization in the second perspective, i.e. as normalization of subjects and their external classification based on the criteria of normalcy. Historical investigations into the evolution of the concept of abnormality regarding mental health, criminality or sexuality prove that it would be too simplistic and inaccurate to understand social norms as a result of explicit establishment following the distinction normal/abnormal imposed by an independent authority. The idea of the existence of a norm prior to its application is something that Foucault tries to prove wrong. The idea that a norm cannot pre-exist its application was advocated also by Canguilhem and thus Foucault keep this concept for his study of social norms. The norm emerges and is thinkable only in a specific application.

5.2. Power of the Norm

Questions surrounding norms and normativity in a society have a central position in Michel Foucault's philosophy. He elaborates the thesis that the pathological and the abnormal are not to be determined absolutely, but only considered in a specific milieu where the given subject is supposed to live. In his doctoral thesis *Madness and Civilization: A History of Insanity in the Age of Reason* he also refuses to identify anomaly and pathology. Foucault set tasks for himself to describe how madness was identified, isolated, treated, what institutions served this

[109] It does not mean that this activity of self-organization could exist separately. The activity of self-organization exists only in concrete historical actions that led to the current arrangement that is formed by norms and the norms do not exist but in these actions alone.

[110] Macherey, 2009, p.74.

purpose, what methods were used to cure, treat or handle patients – to sum up, he tried to depict a complex picture of norms and normativity. In one of his lectures *Les anormaux* from 15 January 1975 he reshapes Canguilhem's concept of the 'norm' as a polemic term and develops a concept of the norm as a political term. For Canguilhem the norm is always polemic as it always implicitly competes with other possible norms, that could eventually replace it, but are excluded due to the existence of the valid norm. Foucault in this lecture first list Canguilhem's work where he presents the general process of social, political and technical normalization that took place in the 18th century. Foucault then refers the Canguilhem's notion of the norm.

> In the same text[111] there is also the important idea that the norm is not at all defined as a natural law but rather by the exacting and coercive role it can perform in the domains in which it is applied. The norm consequently lays claim to power. The norm is not simply and not even a principle of intelligibility; it is an element on the basis of which a certain exercise of power is founded and legitimized. Canguilhem calls it a polemical concept. Perhaps we could say it is a political concept.[112]

Here Foucault tries to remind that a norm has as its inherent part– an entitlement to power and executive power and implicitly an activity. This activity is an attempt to view social normativity, though based on the deliberate, reflexive compromise of different normative systems, as an activity of living human beings, that is formed in a net of relations with nodes of different relevance and power rather than a pyramid structure with a centre of power on the top and unidirectional influence. In his work, Foucault set himself an objective to trace the inherent and self-organizing aspect of social normativity. He does not want to deny the fact that social norms are influenced by reflexive thought, but he wants to demonstrate that the practice of social norms has more spontaneity than Canguilhem would like to admit. Foucault earns merit for the description of how actual practice is much more relevant for the enforcement of a norm than the executive power which originally declared the norm. Through mutual relations in society the complex of actions of individuals constitutes and legitimizes the norm. An effective social norm is the complex of actions where original normative authority is almost non-present and the power is executed on the basis of regular controls, observation, recommendations, programs, reforms, through omnipresent institutional control of all the aspects that are related to basic vital functions. Foucault presents this institutionalization in detail because these are the

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[111] *The Normal and Pathological*

[112] Foucault, M. (2003) *Abnormal. Lectures at the Collège de France 1974-1975.* Trans Burchel, Graham, London: Verso, p. 50.

administrators of power, that guides the society. The establishment of institutions for the administration of human activity related with the most fundamental vital function is an important moment in the transition of power from one single centre to the net of power relations. In these institutions relations of power are interrelated and interdependent. Foucault uses the term biopolicy to depict this complex structure of relations of power.[113]

In *Discipline and Punish,* Foucault sets the institution and enforcement of a norm in contrast to the juridical power and its system of punishment. The system of norms concerns the variety of human beings, whereas juridical power is concerned with the law, text and meaning. Therefore, the norms face the variety by a differentiation of an individual, juridical power defines actions with general criteria. Foucault's conception of a norm is closely connected with the notion of discipline. Discipline is a means of actual application of the norm by individuals.[114] It was the power of discipline that introduced the power of the norm. The concept of discipline helps us to understand how the reflexive idea of a social norm operates within individuals. For a social norm to be effectively enforced. it needs continuous control, measurement, selection, reduction, homogenization, differentiation. All these activities are aimed at exploring the treated phenomenon and at defining the limits of normality and classifying and describing abnormality, which results in attempts of inclusion of the abnormal that is kept isolated and separated from the normal. The isolation of the abnormal makes it part of the normalized society. It is a new way of controlling a society that no longer relies solely on the enforceability of the law and punishment for its violation, but is rather based on control, measurement, identification and rectification of various deviations of the norm. Foucault follows the direction of Canguilhem and explains how the deviation is included in the society by a sophisticated process of normalization. Foucault traces the evolution of institutionalization in the treatment of mental illness. He points out the moment when deviation and abnormality came to the centre of attention, they were classified, analysed, examined and on the basis of classification and study they were involved again to the society with a secured space where they are protected from both the external and internal influences.

Foucault studied different approaches to social organization of certain social phenomena and how they affect the society. If Canguilhem made efforts to demonstrate that an organism

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[113] The biopolicy is a way of controlling or managing the society by the classification and control of essential vital aspects. The policy is carried out not directly by promulgating laws but instead by a thorough control of society regarding the essential vital functions and classifying the individuals of the society on the basis of criteria of normalcy.

[114] Foucault, Michel (1995) *Discipline and Punish: The Birth of the Prison*, trans. Sheridan, Alan, New York: Vintage Books, p. 184.

and society are different in nature and should not be identified, Foucault acknowledges that the organic approach is one of the legitimate ways of maintaining a society. He goes in detail through the tendencies in 18th and 19th century that understand the society as a giant organism whose health is to be cared about and examined. Instruments that are to help with this task such as medicinal statistics, continuous health checks based on the year of birth, analyses of demographic indicators, promotion of hygiene standards, nutrition, the priority of healthy life in campaigns, etc. become a common part of social life.. The phenomenon that Foucault aims to uncover is the expansion of medical authority to the society in all its aspects which results in the reasoning in terms of 'public health' and contributes to the general 'medicalization of society'. Foucault uses the this expression 'medicalization of society' to describe the approach through which various forms of social life are classified in terms of the normal and abnormal, healthy and pathological, harmless and dangerous.[115] This way of classification is different from the legal classification. In the legal enquiry, the objective is to separate the acceptable from the unacceptable, whereas the medical approach separates the normal and the abnormal. The difference in the approach is related to a difference in the objective. Although they both aim to correct the subject, for legal intervention this means to punish, whereas for the medical approach this means a curative transformation of the subject.

Foucault's extensive work of on the historical role of social institutions and the role of power helps us to understand also the difference between the authority of a norm and authority of a law. The distinction of permission and prohibition is replaced by the distinction between the normal and the pathological. Simultaneously, the power in society is not exclusively held by judicial institutions, but its significant part is transferred to various institutions that are made to classify, administrate, analyse, treat and enforce the differences between the normal and the abnormal. This is the purpose of all the psychiatric institutions, psychological advice, criminology and institution of prison, institutions controlling the medical, hygienic, pedagogical and educational standards. In *Discipline and Punish,* Foucault is very much concerned with the historical survey of this transition from the authority of law to the normative authority of social institutions that administer human life in all aspects. Normative authority is not limited to the literal prescription followed by an intervention against deviations, it is a more detailed, careful, omnipresent vision communicating through the set of rules, incentives, recommendations and attractions that are here to school, to rectify in order to integrate the

[115] Foucault, M. (1994),„Le pouvoir, une bête magnifique", *Dits et écrits III*, Paris: Gallimard p. 374.

individual. Instead of being punished for the committed crimes, the normative authority controls the procedures that are maintained so that the individual along with his or her corporality is more oriented towards the original normative objective. The instrument of social normativity on the individual level is *discipline*. Normative institutions accompany the individual on the way of building one's own discipline regarding various aspects of life – health, hygiene, pedagogy, work life, leisure, relaxation, nutrition, sexuality and others. Discipline is defined as a method that enables detailed control of body activity in the sense of obedience and utility.[116] The normative system of society based on various institutions listed above is a reaction to the fact that the juridical system of punishment proves itself as insufficient in solving the social problems of criminality, health and illness and demographic control in general. The purpose of the law was to set limits for all members of society which were explicitly manifested in punishment that ensued whenever a law was broken, (which is why the public executions took place – it was a demonstration of the law itself). The purpose of a norm, on the other hand, is not to let people act freely within the limits of the law –it is careful guidance regarding the human body and its biological functions in order to maximize the effectivity of a member of the society together with complete control over the biological aspects of life of an individual. This concern with the administration of the biological aspect of life is an aspect of biopolicy. This shift from the law to the norm helped to maximize effectivity of the power that can now reach to the levels of human life that were previously not reachable solely by law.[117] The efficiency of the executed power goes hand in hand with the economic efficiency by establishing standardization for many aspects of human life.

The sophisticated methods of control of social normativity supplement and partially replace the system of law and punishment. For the highest effectiveness of the normative rationale. it became evident that it would help the efficiency to have the most detailed means of analysis possible for the life of a population and thus gain knowledge of every single person. Through discipline that can be continuously cultivated in the individual, every member of society is guided reliably in the direction of the normative intention. Foucault described the role of discipline in the course of modern history repeatedly throughout his work and notably in *Discipline and Punish.* The normative power of a norm is based not on the punishment of condemned criminals, but instead it communicates with its subjects through the set of rules, bids and recommendations using a difference between the normal and abnormal and thus

[116] Foucault, 1995, p. 137.
[117] Ibid., p. 218.

carefully leading every member of the society to the intended goal of the norm. The paradigm for this normative concept was represented by the invention of Panopticon: the architectural arrangement of a prison that enabled constant surveillance of every member of the system. Simple spatial arrangement guaranteed the complete control that could be made virtually by everybody who was placed on the top of the controlling mechanism. The sole fact that everyone could be observed at any time makes everyone to follow what he or she is supposed to do. Any additional restrictions or orders are not necessary for this sole aspect, that everyone in the panopticon, prisoners as well as guardians is virtually under constant watch result in the smooth overall obedience to the norm based on the identification with the norm.

5.3. Immanence and Productivity of Norms

An important aspect of a norm can be described by what Pierre Macherey calls the immanence of a norm. The principal idea of this concept is that a norm does not precede the application of a norm. Norm is not something that is originally invented and only afterwards imposed on its subjects. Norm exists only as an actual application as far as it is able to influence a particular activity. Macherey therefore defines the immanence of a norm as an identity and simultaneity of causes and effects. [118] Hence, norms are not to be understood as formative rules applied externally on life, but rather they emerge from within the vital process where the objective of a norm origins. Although Macherey states[119] that this applies for both Canguilhem and Foucault, we should specify that this applies to Canguilhem's concept of vital norms.

Canguilhem understands social norms as an imposed concept that is first invented in detail and then applied to those who should be subject to them. For Canguilhem an individual, a human being that is formed by the intrinsic vital normativity, faces the power of social normativity in a society that is imposed by the government or sovereign. One of Foucault's aims is to overcome this duality of norms by showing that both types of norms have an intrinsic nature and both express one's very own life activity of an individual. The conception of an immanent norm also explains the mechanism of power in society with regard to the modern institutionalized society. This conception therefore updates an ancient model of a sovereign imposing norms on its subjects is replaced by a concept of relations of power that are interconnected and interdependent and thus execute the power not in a vertical concept, but rather in a horizontal concept where every member is not only a subject of the norm, but also

[118] Macherey, 2009, p. 10-11.
[119] Ibid.

contributes to the system of norms by his very own normative behaviour. The subject follows the norms in its own individual way, understands the norms as a prescription of *how* to behave. This is expressed on many levels, for instance in education where pupils and teachers are subjects of the norm (educational requirements of a society) and at the same time they actually enforce the norm in their particular conditions by playing their role as pupils and teachers. The same applies for the relations between doctors and patients, between convicts and prison guards, and also in a family between parents and children and even between a husband and wife.

Social norms are then not to be understood as a pure result of an autonomous decision of the government, because the government itself rather fulfils the role of a mediator for various shifting relations of power instead of a central seat of power. This is one of the most important contribution of Foucault to the concept of norm and power. In this sense everyone is a subject to the norms in a double sense. Firstly, everyone is a subject to norms which means that everyone has to face the effect of a norm, is measured by it and the activity of a person is measured by the norm. Secondly, the other meaning of being subject to a norm is that if we either act accordingly to a norm or act against it, we can become agents and productive members of the society only in our relation to norms. The norms, regardless of whether we follow them or not, form the core of the social structure and the role of every member of the society are defined with regard to valid social norms. The second aspect of the norm implies that there is a space where the norm can be applied, it creates a new space for individuals to regard themselves as subjects. A norm expands the space for possible experience and creates new possible ways for an individual to understand himself as a subject. Macherey describes this as a productivity of a norm.[120] This concept is far from the perspective that sees a norm as limitation or restriction. On the contrary, it creates a new field of experience, with new conditions for truth where everyone is to identify oneself with regard to the norm. Such a field would be for example sexuality as Foucault describes it in the *History of Sexuality*[121]. This new field distinguishes individuals on the basis of the category of normal and abnormal where the individual and his subjectivity is considered an object of the norm rather than its initiator.

One of the important functions of norms is that they create a field of relations, their role is to create a structure where individuals can place themselves as subjects. Social normativity opens possibilities for individuals to find their role in the society. It is the foundation for the possibility of becoming a subject. A norm setting order in a society creates various roles that

[120] Ibid., p. 75

[121] Foucault, M. (1978) *The History of Sexuality. Volume 1: An Introduction,* Trans. Hurley, Robert New York: Pantheon Books, p. 44.

are played by different subjects. Subjects can retrospectively identify themselves and in the society on the basis of their position in the norm. A norm opens up a possibility to become part of the society by finding one's place in the system of norms in the society. A norm thus creates a possibility of being a member of a system of social relations. Macherey describes[122] this important feature of norm as not being in a rigid system based on a pure domination, but instead as an engagement of all individuals without exception into a homogenous and continuous net of relations that produces individuals as subjects. Following Foucault, Macherey echoes the question that Kant posed as the fundamental question for his work: "What am I at the moment?" In the sense of: What is the actual field of possible experience? These questions are implicitly connected with norms as instruments to establish a field of experience. This applies to the sensual experience as well as to the understanding of one's position in a society. To situate oneself with regard to a norm, which is considered as a field of possible experience, means in fact to define oneself as a member of a normalized society. For such subjects a norm is no longer a simple law that prescribes or forbids certain activity. Norm in this perspective is a way of expressing oneself universally, i.e. in a way that it is understandable, in the language of the norm and thus becoming a subject that adopts the norms of actions as proper and takes them as a means to express oneself. Therefore, by practicing norms individuals become constituents of a society. Thanks to norms we can belong to a society as its members, as subjects. Macherey explains that being a subject, which means to belong to a society, is in fact to act as both an element as well as an agent in the global process that creates the field of possible experience.

The singularity of a subject is not limited to the isolated individual, but extends beyond the limit of an individual. The singularity of a subject can be grasped only in the relation with other subjects with whom the subjects communicate. Simultaneously, the relation must be understood as a global process that is here to constitute and normalize the subject. The social norms offer a certain position in the society where the subject can perform his actions. This position comes with a certain purpose for the subject in the overall arrangement of the society. Singularity of a subject or subjectivity in social sense is generated by being entangled in the process of social normalization. Macherey supports his argument in favour of productivity of norms with a reference to Kant's notion of law. Social norms are what binds subjects to the society and this bond is translated to the 'law inside of me', that is understood as general law that applies to me for I have found out that it should apply to all rational beings including

[122] Macherey, 2009, p. 78.

myself. Macherey proposes[123] the interpretation of Kant presented originally by Jacques Lacan.[124] Lacan argues that because the law is an essential part of an ideal community where subject is depicted as endowed with desires and at the same time forms these desires in the direction of the law. Kant[125] understands the norms, not as prescribed by men, but considers them as the expression of natural law. However, according Kant the social norms are based in the necessity of things, it is not a human order structured by contingency. These laws are therefore laws in the sense of physics rather than in the sense of the law. Hence, the productivity of the norm derives the productivity from an ideal, which, once it is fully understood and unified with the desire in volition, produce autonomous normative behaviour.

5.4. Polemic and Dynamic Norms

We have previously stated that being a subject of norms has a double meaning and one of them has to do with an understanding an individual as a subject. A relation to a norm defines an individual as a subject: it is through its relation with a norm that an individual can identify himself and accept his role within the society. Social normativity includes individual deviations and they serve for more precise classification and control of individuals. The subjectivity that is founded in social normativity also implies that an individual has the ability to distance itself from a particular norm, when a norm proves itself insufficient and distorted. There is a risk involved with distancing oneself from the established social norm – one cannot be identified properly and is therefore not understood within the society. For example if one does not identify oneself neither as a male nor female, one risks that won't be identified at all.[126] In Canguilhem's concept of norms, the instances that are out of norm are an opportunity to re-evaluate and re-establish the relations of an organism with the environment. In spite of the differences between vital and social norms that Canguilhem claims, for both there is a common characteristic which is the role of the abnormal. The significance of the abnormal lies in the fact that an individual as well as social life constantly faces situation and moments that do not fit the regular sequence of facts. Canguilhem points out that it is this very experience of the abnormal that makes us think in terms of normality and normativity. This leads to the provocative claim that "the

[123] Ibid., p. 82

[124] Lacan, Jacques, "Kant avec Sade", 1962 in *La philosophie dans le boudoir*, éd. Borderie 1980, pp. 81-107

[125] Kant, Immanuel, (1784) *Answering the Question: What Is Enlightenment?* Available at: https://www.aub.edu.lb/fas/cvsp/Documents/reading_selections/CVSP%20203/Fall%2013-14/What%20is%20Enlightenment%20-%20Immanuel%20kant.pdf [Accessed 6 Aug 2017]

[126] Švec, 2012, p. 73.

abnormal, while logically second, is existentially first."[127] This statement implies that the order or normality becomes apparent in its negative aspect, when we encounter something that does not correspond with the order or normal state. Therefore, every society and individual face the problem of normativity in the form of a reaction to the encounter with something abnormal. That is the reason why every norm should be considered polemic, because it implies different and opposite normative demands and thus exceeds one single normative system.

Guillaume Le Blanc sums up the specific characteristic of norms. It is evident that a norm is not an abstract construction of a rigid rule imposing some obligation externally.[128] Norm must be understood as an expression of actual tendency to restore a balance and so its value is based on the repetitive aspect. The norm of a phenomenon reveals relations of the structure of the phenomenon. The phenomenon can be structured only on the basis of a system of norms. Otherwise it is just a movement without sense. The norm is determined by its limits. A reference to a variability of a norm means not only to fix the norm relatively to the extent of actual instances but also to fix the possible instances to the norm. The mutual aspect of relations between a living being and the milieu is founded in the normative orientation that is the essential characteristic of living being.

Canguilhem highlights dynamic aspect of norms which means that they are acceptable or tolerable deviations from the norm. There is a possibility of establishing a norm within that norm that can deviate from the original valid norm. This deviation, which is originally considered as violating the original norm becomes later a norm of its own and sooner or later starts to be widely accepted. An illustrative case for this can be a newly constructed park with paved roads for pedestrians. If the roads do not match all the paths that people use to walk through the park, then the pedestrians begin to create their own roads by taking shortcuts on the trampled grass, which later become dirt paths. Later on, these paths assume the status of paved roads and soon they are also paved and thus acknowledged as regular roads.

[127] Canguilhem, 1989, p. 243.
[128] Blanc, 2005, p. 132.

6. Conclusion

The purpose of this thesis was to demonstrate that a norm is not a limitation that could be known *a priori* and consequently the normal does not have to be necessarily deduced from descriptive data on the basis of physiological approximation. The question of norms touches the crucial issue of the relation between nature and culture. The ultimate question of the relation between the natural and cultural is whether these domains are completely heterogeneous or whether there exists some kind of continuous relation and constant exchange between these aspects of reality.

In his *Essay* from 1943, Canguilhem opposes the positivist biologists, notably Claude Bernard, who conducted laboratory studies with pathological phenomena. Canguilhem drew on Goldstein and turned this approach around – instead of examining the pathological from the perspective of a disinterested observer, he studied the pathological from the perspective of an individual for this individual, that is, how the pathological condition diminishes the quality of life of that very patient. Together with Goldstein, Canguilhem helps to restore the epistemological value of a subjective statement about the effect of the pathological on the life of a patient. The pathological is a problem that the patient has to face. Medicine in this view becomes, instead of pure science, rather the art of life, which helps to clarify the understanding of a concrete pathological problem, independently of the efforts to cure the pathological state and thus eliminate the problem. One important term for Canguilhem is experience – it forms an opposition to the biological approach that comprises a patient as an object in laboratory. The value of this 'experience' serves as an argument against positivist biology and physiology that

> has better to do than to search for an objective definition of the normal and that is to recognize the original normative character of life. The true role of physiology, of sufficient importance and difficulty, would then be to determine exactly the content of the norms to which life has succeeded in fixing itself without prejudicing the possibility or impossibility of eventually correcting these norms."[129]

Canguilhem accents the important feature that norms do not have the factual objectivity and that they cannot be observed directly. Their phenomena do not represent a static expression of normalcy but instead a dynamic nature of normativity. Experience reveals norms as an impulse towards a result that is not guaranteed, not present but hoped for. This normative tendency of human behaviour is apparent in our struggle for higher achievements, the constant

[129] Canguilhem, 1989, p. 178.

efforts in overcoming our predecessors, our colleagues, ourselves. The positive attitude towards all activities is founded in this dynamic inspirational impulse of a norm.

Canguilhem therefore reverses the traditional relation between norms and life. In the traditional sense, norms operate externally and life is subordinated to them, however, in Canguilhem's explanation it is life that produces norms immanently from its own accord. The fundamental idea of Canguilhem's doctoral thesis is that there exists an essential normativity of a living being that creates norms which express the constitutive polarity of the organism. The normative concept of the organisms also implies that an organism cannot be reduced to its mere material existence, because an organism always manifests certain capacity, power and therefore it is a potentiality that is not present as a whole, it is always incomplete in a certain way and it is constantly confronted by the risk of disease and ultimately by death. Canguilhem presented vital normativity as an essential way of life, it is an instrument of the effort so it can motivate and set the organism in motion. Norm is the capacity to see the difference between the actual state and the virtual state of an organism combined with the conviction that the virtual state is achievable and it is worth making the effort in order to achieve it. These efforts are either conscious or unconscious and these unconscious efforts, which are embedded in the life in general, are the spontaneous efforts of normativity of life.[130] For an organism, norms are a way of developing themselves in their own environment according to their intentions or natural motions. Canguilhem criticised positivist biology from the perspective of a specific life of a particular organism. He thus elaborated a phenomenological perspective on the system of norms and normative activities.

Foucault follows a slightly different path, as his aim is to track the historical 'birth' of institutions of normalization. It was a historical event that developed as a political and social process. For this reason, Foucault presented his project as an archaeology. Medical norms are not viewed from the perspective of a patient, but through the eyes of the authority of a physician and medical institution in its historical development. Unlike in Canguilhem, the patient and his personal suffering is displaced, it is not in the centre of a discourse anymore in Foucault. The pathological state is explained exclusively through the view that is at same time normative and normalized and sets the criteria of normality. thus establishing general normalcy. For Foucault, the individual ceases to be a subject of normativity and is instead an object of it. Normativity is applied on the individual. The normativity of a single organism is pushed aside so that the normality can emerge in double sense. In epistemology, it formed the knowledge and in politics

[130] Canguilhem, 1989, p. 126.

it regulated behaviour. Although Foucault uses the term experience, the meaning is opposite from the Canguilhem's usage of the term. Experience now means "to take things in their structural strictness"[131] which is no longer the experience of a single organism, now it is historical experience that is anonymous and collective. It is no longer a concrete experience of an individual, but it is now an experience of life in general, which is how the 'experience of the clinic' should be understood. The experience of the clinic consists of three points: clinic is a place where a doctor masters his experience, where he or she comes into contact with experience through medical examination, and it also assigns an institution that defines the experience in the social context and puts it under its own control. This triple function revolves around a patient, who is in the centre as the object of observation. The patient can be observed only by a medically educated staff for whom the patient is a mix of educational source and an experimental field and their relation is socially and geographically concentrated and isolated in the institution that defines and makes the whole activity legal and official. This experience of the clinic offers the patient the assurance of being a subject of treatment and the eventuality of being cured and successfully diagnosed as normal on the basis of the criteria that were previously stated by the institution in charge.

In 1963 when *The Birth of the Clinic* was published, Canguilhem prepared his *New Reflexions* where he returns to the questions about norms, but is now interested rather in the normative questions regarding the society instead of investigations into the normal in biology and medicine. The fundamental question is whether it is the same normativity which is typical for vital functions and behaviour, as the normativity that organizes the social relations. The question is whether it is possible to match the normativity of a society that takes the form of an active normalization of the society with vital normativity that guides the vital processes of an organism. He concludes that the normative activity is different for both. Although Canguilhem thinks that we should distinguish between vital and social norms, he does not think that they are totally different in principle. In *New Reflections* he points out that vital norms are an expression of an effort of man in setting such an order that makes sense only with regard to a society which the individual is a member of. In the same text Canguilhem denies any possible derivation of social norms from the biological ones in a sense that they could be a result of continuous activity of 'inventions of organs'. Canguilhem does not accept the vital as an

[131] Foucault, Michel (2003) *The Birth of the Clinic. An Archaeology of Medical Perception,* trans. Sheridan, A.M., London: Routledge*,* p. 16.

undeniable model for the social, it is rather the social that pushes the vital in front of itself and the knowledge of the vital presupposes the social as its own condition.

For these reasons, norms, be they vital or social, cannot be reduced to a simple determinism and are internally ambivalent which Canguilhem was aware of and used as the title for his work *Knowledge of Life*, where 'knowledge' (*connaissance*) can mean simply an object of knowledge of a vital organism – a subject of life. However, it can also mean an activity that is performed by the subject of life through which it produces or creates knowledge and attributes various values to it. Life is not solely a subject, neither an object, life is a capacity, or power which is therefore unlimited and this is the reason why its characteristics are revealed primarily in negative manifestations when its capacity is diminished and limited.

Regarding the nature of health and disease, Canguilhem's view is much more explanatory. Foucault does not acknowledge the importance of the perspective of a patient. Foucault completely ignores the phenomenon of subjective suffering. Instead of a description of health and disease and instead of a definition of pathological, Foucault offers a sociological perspective, i.e. the way how a disease is classified and treated in a society. Foucault thus does not add much to the understanding of the pathological, for he rather concentrates on the ways how society deals with the pathological. Canguilhem's opinion supported by the study of Goldstein is therefore much more seminal for the conception of the healthy and the pathological.

7. Bibliography

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