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**“Clash of Paradigms – The Formalist-Substantivist
Debate and its Wider Implications for the Explanation of
Human Behaviour”**

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*For every subtle and complicated question,
there is a perfectly simple and straightforward
answer, which is wrong.*

H.L. Mencken

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Clash of Paradigms

The Formalist-Substantivist Debate and its Wider Implications for the Explanation of Human Behaviour

Preamble

What is man? How – and on what level – can human behaviour be explained and analysed? To answer this research question, we will revisit the “formalist-substantivist” debate in economic anthropology as it serves as an exemplary clash of paradigms over the authority in explanatory approaches regarding social systems and human behaviour. “(...) [E]conomic anthropology addresses questions of human nature and well-being, questions that have preoccupied every society’s philosophers from the beginning” (Hann and Hart 2011: x). The so-called “formalist-substantivist” debate in economic anthropology constitutes a controversy about the universality of *Homo economicus* – economic man – exploring the fundamental question of “human nature”¹ and human behaviour. The central topic of contention in the debate concerns the question whether formalist economic analytical tools are apt to explain empirical economic phenomena in non-market societies. The present analysis seeks to answer whether the fundamental assumptions underlying the body of standard² economic theory are universally valid for all societies at any point in history. This question has led to heated controversies after the economic historian Karl Polanyi suggested that orthodox economic theory was only applicable to modern market economies, however useless for the analysis of non-market societies. For the understanding of non-market societies, where economic relations are “embedded” in the social structure, or, to speak with Mauss, where economic transactions can’t be separated from “faits sociaux totaux” – total social facts – in which they are integrated (Humphrey, in Polanyi 1979: 8), Polanyi opts for a substantial institutional analysis that does justice to the structures and functions of non-market societies on their own terms. The resulting “formalist-substantivist” debate shall serve as a case study to set forth general paradigmatic fault lines that traverse the realms of academia.

¹ The term “human nature” is hereby set under quotation marks to indicate the provisional use until its closer analysis in the course of the present argument.

² Also referred to as “mainstream economics”, or “orthodox economics”.

The question of human behaviour and its key determinants has developed into a major contested battleground of paradigms over the prerogative of academic explanations with a strong emphasis and an immense interest in biologicistic and standard economic models that are widely spread in the public media (Hakami 2004: 157). The reason why this debate still matters today and why I am adding another chapter to the already vast amount of literature concerning this controversy, is the lack of framing the debate analytically in terms of its fundamental principles. Thus, this analysis takes as its point of departure the “formalist-substantivist” debate in question and seeks to detect the underlying assumptions regarding *Homo economicus*. To answer the research question, analytical tools informed by the epistemological principle of science will be applied.

As the assumption of economic man saw backing from bio-psychological approaches, we will link our analysis to the fundamental questions of human universals and whether or not human behaviour can be explained in terms of biologically determined instincts in the individual. Due to the fact that bio-psychological approaches, as we will argue, fail to explain differences and similarities in socio-cultural phenomena and human behaviour, we will introduce an alternative scientific-materialist-holistic account which provides a fruitful explanatory framework, fully taking into account *Homo sapiens* ability to symbol as a phenomenon of emergence.

Controversies and debates surrounding a certain topic constitute de facto a clash of paradigms. Consequently, participants in these controversies usually talk past each other which renders these debates futile, unless we explain the underlying paradigms that inform the respective theories. This task shall hereby be done in the present analysis which offers a systematic approach towards the paradigmatic understanding of the multiplicity of theories surrounding the question of “human nature”. In order to do so, we will apply an analytical framework which is based on the angle of philosophy of science. The aim of the present analysis is thus to detect the underlying principles of the various theories rambling around the “formalist-substantivist” debate. The emphasis hereby lies in the precise application of the terms formalist and substantivist, as the assumption of the existence of “the” formalist or “the” substantivist present a clear misconception of the terms. The use of formalist or substantivist methodological approaches are embedded in a set of principles that only together form a paradigm. Thus, a formalist (or substantivist) approach can present itself in various – even competing – paradigms. Hence, it is of key importance to dissect paradigms into their respective underlying principles. By doing so, the findings of this analysis will allow us to

penetrate into the core of the discussion and the foundations of the discussed theories and will enable us to evaluate the respective theories by introducing an analytical framework to relate and compare them and eventually refute those who have proven to be sterile in terms of their ability to provide productive scientific contributions. The value of this analysis lies thus in the introduction of a systematic frame of analysis and the enabling and facilitation of an evaluation of prevalent theories in the discourse surrounding *Homo economicus*. We will explore which set of principles proves itself suitable in the explanation of socio-cultural phenomena and human behaviour.

The following hypothesis is examined throughout the subsequent chapters: *If we apply scientific criteria on the concept of Homo economicus, then the Homo economicus presents a logical fallacy.* Bearing this in mind, the following analysis engages in a logical argument to discuss the economic man's limitations from a scientific perspective and immerses once again in the infamous debate of nature-nurture in cultural and social anthropology.

Chapter 1 presents the analytical framework of this thesis, by introducing the underlying principles of the discussed paradigms and their interrelations. It provides a scientific tool kit which enables us to scrutinise and evaluate the theories stemming from the respective paradigms. Chapter 2 engages in the “formalist-substantivist” debate and detects the paradigmatic fault lines surrounding the discussion about *Homo economicus*. Chapter 3 provides an empirical case study – the potlatch – to illustrate the explanatory strategies stemming from formalistic and substantivist approaches. Chapter 4 treats the relationship between formalistic economic and biologicistic accounts. It examines why these paradigms reached a consensus in the explanation of human behaviour. Chapter 5 broaches the fundamental logical fallacies committed by the discussed explanatory approaches and offers an alternative research strategy to explain socio-cultural phenomena and human behaviour.

1. Philosophy of Science – The Analytical Framework

This chapter gives an introduction on why opponents in academic controversies tend to talk at cross purposes. It explains the importance of taking philosophy of science as an analytical angle in scientific debates and introduces the set of principles that typically underlie these discussions. It concludes with an analytical framework that will be used in the subsequent chapters to categorise various theories according to the principles that inform them. Using the so-called “formalist-substantivist” controversy in economic anthropology as research focus to exemplify the underlying principles, the analytical framework is not limited to a particular research area. This chapter explains the applicability of the presented analytical framework in any scientific debate in general.

1.1. *Philosophy of Science*

The present thesis is written from the angle of philosophy of science. What does this theoretical approach imply? Why does it omit certain historical perspectives? To answer these questions, we must start from the assumption that from a theoretical viewpoint in the philosophy of science, the question of how hypotheses originated is irrelevant to the argument (Wiltsche 2013: 82). “(...) [W]hile inquiries into the sources of a scholar’s knowledge may cast light on the motivations which led him to espouse certain ideas, they are logically irrelevant to a critical appraisal of the validity of those ideas” (Kaplan 1968: 232). This explains the further lack of an historical approach in the following chapters. Currently, there already exists a large body of literature that concerns itself with historical approaches on the topic. To provide the interested reader with an overview regarding the historical contextualisation of the so-called “formalist-substantivist” debate in economic anthropology, I recommend the reading of the works of Zagitzer (2013) on *Homo economicus* and Hann and Hart (2011), who give a historical outline on economic anthropology in general. For the present analysis however the *context of discovery* is beside the point for the theoretical analysis of the *context of justification*. The present work asks about the objective validity of *Homo economicus* in terms of philosophy of science. To recognise the validity of a theory, one does not yet have to make observations or conduct experiments, nor to undertake statistical surveys or field research. As a first preliminary step it suffices to analyse the argument and its logics from a theoretical angle to show whether the theory is coherent and

consistent in itself and therefore to be considered to be “scientific”³ (Büttemeyer 2014: 39f.). Hence, we will undertake a theoretical examination in regard to *Homo economicus* that will lead us to conclusive results concerning whether or not economic man presents a fruitful tool to analyse economic phenomena.

Paradigms, Principles and Theories and their Interrelation

Let us initially turn to the core concepts that (be it implicitly or explicitly) govern any scientific debate, namely the definition of “paradigm”, “principle” and “theory”. An exact understanding of these concepts will enable us to conduct our analysis in a precise manner. This step seems indispensable to me in order to avoid rhetoric inaccuracies that could affect the quality of the presented argument.

A *paradigm* is a conglomerate of a set of implicit principles that taken together comprise the scientific worldview and guide scientific research and theory building. The paradigm determines which questions are asked in the first way.

The *principles* underlying a paradigm present the overall approach towards a scientist’s research area and can be differentiated as the ontological, the epistemological, the theoretical and the methodological principle constituting a paradigm. The principles define a certain way of approaching a phenomenon. As the principles that stipulate a paradigm are assumptions, they are by their very nature not subject to falsification, which means they are not provable via evidences, neither verifiable, nor falsifiable. Guba and Lincoln lay out this characteristic of paradigms as follows: “The beliefs are basic in the sense that they must be accepted simply on faith (however well argued): there is no way to establish their ultimate truthfulness” (Guba and Lincoln 1994: 107). This perspective – however true in regard of defining basic beliefs as assumptions – is to be countered with the argument that the quality of a paradigm can indeed be evaluated. Acknowledging that principles or paradigms as a whole do not achieve the status of a scientific theory, we can offer an outlook on how to assess the quality of a paradigm in scientific terms: “[However], this doesn’t mean (...) that paradigms are ‘ships that pass in the night’ ” (Harris 1994: 63). There are certain criteria we can apply to the analysis of paradigms that provide information concerning the explanatory power of a specific paradigm, namely via the theories they produce.⁴

³ For a more detailed elaboration on what is to be considered “scientific”, see below.

⁴ After this preliminary remark, this point will be elaborated below.

Scientific *theories* are – consciously or unconsciously – derived from the set of principles which together form the paradigm. Theories stem by their very nature always from the underlying scientific worldview and hence depend on the concrete combination of principles. In this sense, a scientific theory can give us information about the researcher’s underlying paradigm, as a principle expresses a general systemic relation that functions as instruction towards theory formation. A theory itself is a system of logically connected scientific statements (axioms) that aim to explain a certain phenomenon by systematically analysing empirical evidence. A theory must be formulated in a way that allows it to be subject to evidence-based falsification and it is actually only falsifiable because it works with empirical evidence. The prerequisite characteristics of a scientific theory are testability, falsifiability, consistency, empirical controllability. It must be free of value judgments and be formulated in a parsimonious manner. Kuhn defines five criteria that he deems the basic characteristics of a scientific theory in order to defend his works on paradigms in against the accusations of relativism in theory choice (Kuhn 1977: 320-339). These criteria are accuracy, which is the accordance of deducible results from a theory with the empirical evidence, and consistency, in itself and also with the body of other theories that are at present classified as accepted in the scientific canon, which signifies that they are, strictly speaking, not yet falsified (ibid.: 321f.). Third, a broad scope which means “(...) in particular, a theory’s consequences should extend far beyond the particular observations, laws, or subtheories it was initially designed to explain” (ibid.: 322). Another aspect is fruitfulness, by which is understood that a theory should set forth a new phenomenon or a yet unrecognised relation between two existing theories, and further: simplicity (ibid.). Simplicity in a scientific theory refers to the law of parsimony, also known as Ockham’s (or Occam’s) razor. In a set of competing hypotheses which opt to explain the same phenomenon, the one should be selected that *ceteris paribus* is constituted by the fewest assumptions. “(...) [A] hypothesis should not be asserted, or an entity postulated, if it is not needed to explain anything” (Sober 1981: 145). The principle of parsimony seeks to avoid an unnecessary multiplicity of arguments that are not helping further scientific insights. “The principle of parsimony (...) counsels removal of an ontological commitment when it is dispensable. (...) [W]e remove the aether from our ontology (...)” (ibid.: 147). The heuristic of the razor requests the rejection of an argument if it is not required to explain *anything* at all (ibid.: 151). “If an existence claim were thereby judged to be superfluous in the task of explaining any known phenomenon, inductive extrapolation would lead us to conclude that it is not the explanation of any phenomenon at all” (ibid.: 151).

1.2. *The Underlying Principles*

Having defined a paradigm as consisting of a set of principles, let us now turn to the principles themselves. Principles express a general systematic relation that provides implicit or explicit instructions for theory building. For a deeper understanding, we can picture these principles as questions, whereby the responses to these questions form the respective paradigm. Guba and Lincoln characterise a paradigm as a set of responses given to three basic questions (Guba and Lincoln 1994: 108). These questions concern ontology, epistemology and methodology. I will add a fourth question, namely the dimension of the theoretical level, namely the “(...) rules for generating and evaluating theories” (Harris 1994: 63). The combination of answers to these four questions is manifold, as is the existence of paradigms today. Yet, the manner in which a question is answered can already give us a hint for the answers to the remaining questions, as certain principles correspond with each other.

“The basic beliefs that define inquiry paradigms can be summarized by the response given by proponents of any given paradigm to three fundamental questions, which are interconnected in such a way that the answer given to any one question, taken in any order, constrains how the others may be answered” (ibid.: 108).

In the following paragraphs we will therefore discuss the four questions, or principles, as well as a selection of the most common answers. The present analysis doesn't however aim at a complete portrayal of any possible answer, as this undertaking would go beyond the scope of this analysis. We will rather focus on those answers prevalently dominating recent debates in economic anthropology without a claim to exhaustive comprehensiveness. Thus, the discussed approaches towards each principle are not meant to present a Procrustean bed, but rather the prevalent answers in the analysed debate.

Ontological Principle: Reality, Nature and the Human Being

The ontological principle is the defining principle, thus providing information on the definition of the studied subject. It characterises the nature and form of reality and answers the question of what exists that we can know about and what we can know about it. The answers to these questions imply assumptions on the nature of the world and the characteristics of reality, i.e. assumptions on the basic structures of any phenomenon in existence, which are referred to as ontology. The ontological principle therefore defines the object of study via factual statements, be it “reality”, “nature”, “human”, “society” or else.

Every object involved in a certain research issue is subject to definition which comprises the researcher's ontology.

One of the basic ontological questions is whether a real world is assumed that exists outside of the beholder. Positivist and Neo-Positivist approaches recognise an apprehendable reality independent from the perceiver, which is subject to certain laws and mechanisms (Guba and Lincoln 1994: 109f.). Neo-Positivism speaks of an approximation of reality. On the other side of the coin, constructivist approaches conceive "reality" as mental constructions, therefore not subject to laws of nature, but rather locally and socially embedded in a specific set of meaning. Reality is perceived as a multiplicity of subjective interpretations, which leads to ontological relativism. Universals, as well as universal principles and processes are negated and therefore also the possibility of comparison. The definition of universals, their distinction and their relevance in the present discussion surrounding the formalist-substantivist debate in economic anthropology, will be further discussed in Chapter 4. The terms positivism, as well as constructivism actually refer to the epistemological principle. As the ontological and the epistemological principle are however closely related, I expand the usage of these terms here to define ontological standpoints.

Another ontological assumption apart from the definition of "reality" refers to the understanding of nature, as well as the human being. In humanist approaches, nature is apprehended as separate entity apart from culture, which is seen as a unique feature of the *Homo sapiens*⁵. Hence, the human being is defined as a cultural being, only comprehensible sui generis on its own terms. The biologicistic approach is characterised by gradualism in its conception of *Homo sapiens*. It perceives the human being as complex animal, only characterised by gradual differences to primates. Exemplarily for the definition of gradualism stands Darwin's declaration that "(...) there is no fundamental difference between man and the higher mammals in their mental faculties", the mere difference being "(...) solely in his [man's] almost infinitely larger power of associating together the most diversified sounds and ideas (...) the mental powers of higher animals do not differ *in kind*, though greatly *in degree*, from the corresponding powers of man" (Darwin 1904 [1871], cited in White 1959a: 4, emphasis – LW). On the other hand, a culturologist definition is distinguished by its punctualism, as it sees the human being as qualitatively different from animals through their ability to use symbols as the origin of human behaviour (White 1949: 22-39). "All human existence depends upon it and it alone" (ibid.: 29). Man is still understood as a human animal

⁵ "*Homo sapiens*" will be henceforth used as an abbreviation and synonym for *Homo sapiens sapiens*.

(which marks the major distinction in regard of the humanist approach), plus the faculty of using symbols. Culture is a new quality in the human experience, a system of extrasomatic, cumulative information transfer which manifests itself in thought and behaviour. It depends on *Homo sapiens*' ability to symbol.

"But man does differ [from animals], not in ends, but in means. Man's means are cultural means: culture is simply the human animal's way of living. And, since these means, culture, are dependent upon a faculty possessed by man alone, the ability to use symbols, the difference between the behaviour of man and of all other creatures is not merely great, but basic and fundamental" (ibid.: 34).

In this context, nature is defined as comprising any phenomenon there is. Actually, the differentiation between nature and nurture is rendered ad absurdum in the face of the definition of "nature" as any phenomena existent in the universe, be it either inorganic, organic or superorganic. Inorganic being matter and energy, basically falling within today's discipline of physics. Organic phenomena are built on an inorganic basis, however present a qualitative difference which is studied by today's discipline of biology. Biology's unit of selection is the cell and genetics. Superorganic phenomena, including in particular culture, are based on an organic basis, yet can't be explained through biological principles, as the superorganic category also presents a qualitative difference that is only explicable through its own set of principles. In this 19th century definition by Herbert Spencer (1910; 1996), nature is therefore comprised by these three categories, distinctive from each other through qualitative differences which stem from phenomena of emergence. Through these qualitative differences, each category, be it inorganic, organic or superorganic is to be explained via a distinct set of principles.

Epistemological Principles: Science/Humanities/Postmodernism

The way in which the question about the ontological principle is answered can usually give us a hint of the epistemological plane, as the assumptions on the nature of reality already imply the problem of what kind of scientific knowledge is attainable that can be said to be true. This philosophical issue goes back to the fundamental questions of what reality and truth are. Thus, epistemology is concerned with the philosophy of knowledge and the prerequisites of acquiring it. We can distinguish three main categories that can form the epistemological principle, namely science, humanities and postmodernism.

Science

So what does “scientific”, or “science”, for that matter, actually mean? We hereby understand a systematic undertaking to uncover laws of nature. “Nature” in this context is to be defined as any phenomenon, inorganic, organic or superorganic, that exists in the universe. “Science is a technique for acquiring factual knowledge that combines the fundamental principles of logical analysis with practical guidelines for evidential appraisal” (Lett 1997: 41). Science is characterised by its underlying assumptions of objectivity, validity and reliability and its systematic, logical approach, reasoned in a way to allow verification and falsification of scientific theories. The assumption of objectivity conveys a reality independent from human perceptions, which can be approximated through the means and methods of science. Science is dedicated to nomothetic research that sets up laws, that is, an invariant relation of two or more phenomena under fixed conditions. Hence, science is striving for the formulation of generally valid and universal theories and scientific laws. Scientific conclusions are reliable, however tentative, as they are subject to falsification. Scientific theories are testable, assuming that we can learn about reality through evidences, presupposing that there is just one reality existing independently from the human observer. Accordingly, scientific research is dedicated to the positive, that is the actual, real and the undoubted. “The belief in an external world independent of the perceiving subject is the basis of all natural science” (Einstein 1934, cited in White 1949: 6). Even though Einstein speaks of natural science, science is not based on a specific subject, but rather is to be typified as a general system of thought. „Science is not merely a collection of facts and formulas. It is pre-eminently a way of dealing with experience. The word may be appropriately used as a verb: one sciences, i.e., deals with experience according to certain assumptions and with certain techniques“ (White 1949: 3). Therefore, from a scientific point of view, it doesn’t make sense to differentiate between different “sciences”, as for example physical sciences and social sciences, as this distinction would imply a fundamental difference in natural and social reality (ibid.: 5). However, as nature has been defined as any phenomenon existing in the universe, the scientific approach opts for the postulate of the unity of science. “We must, in short, view science as a way of behaving, as a way of interpreting reality (...)” (ibid.: 6), independently from the object of observation. This epistemological principle has also been termed “positivism” and since introduction of the criterion of falsification “neo-positivism”. A common accusation by humanists and especially postmodernists is that science lacks the contextualisation of its human dimension and that eventually all scientific undertakings are biased by the subjectivity of perception, representing a hegemonic Western system of thought. However, “(...) [t]he fact

that there is no absolute perspective is exactly why we need a standard of scientific objectivity (...)” (Lett 1994: 45), a systematic, testable and publicly verifiable approximation to reality. The reply to this allegation can be thus summarised as follows:

„Science does not claim absolute certainty, nor does it deny that the perception of reality is a process of active interpretation rather than passive reception. Instead, science claims provisional certainty based upon a process of unrelenting skeptical inquiry (...)“ (ibid.: 41f.).

This statement leads us to the temporary result of a scientific theory being true, until its disproof, or falsification, which makes the scientific undertaking tentative by its very nature, highlighting its self-correcting character.

The Criterion of Falsification in Scientific Theory

The criterion of falsification in scientific theory has first been introduced by Karl Popper. By doing so, he sought to answer the problem of induction, originally set forth by David Hume. Popper criticised the theorem of verification of scientific theories and introduces the mechanism of falsification to solve the deadlock of induction. Scientific theories have to be reasoned in a way that permits falsification, i.e. theories must be constructed in a way that allows disproof through new empirical evidence. Popper “(...) is merely the most notable of those scholars who identify testability as the sine qua non of science: ‘a system is to be considered as scientific only if it makes assertions which may clash with observations’ ” (Popper 1963: 256, cited in Lett 1994: 44). Falsifiability is the necessary precondition for testability, and thus eventually for evidential refutation of a scientific statement.

Logic and Logical Fallacies

Scientific theories are reasoned as syllogisms, which are arguments that correspond to a system of recognised, formally defined forms (Lett 1994: 58). These syllogisms correspond to the principles of logic, i.e. “(...) a set of rules governing the validity of inference” (ibid.: 57). The principles of logic therefore constitute a framework to reason scientific statements and are used to evaluate the validity of an argument. Validity is a criterion to analyse if the conclusion logically follows from the premises.

“It may be surprising, however, to realize that the conclusion of a valid argument can be unreliable. The reason is simple: valid arguments can contain false premises. (...) Remember

that the truth or falsity of the premises has nothing to do with whether or not an argument is valid. Validity is simply a measure of the argument's form" (ibid.: 61).

In the context of invalid arguments we can speak of logical fallacies, which are errors in logical reasoning where the conclusion doesn't follow from the premises. A common example for a logical fallacy is the fallacy of *petitio principii*, or "begging the question". *Petitio principii* is a classical example for circular reasoning, *circulus in demonstrando*. In this line of argumentation, a premise is reasoned through arguments that are already held to be true in the premise (truism). The explanans must be independent from the explanandum in its line of argumentation, otherwise the reasoning is comprised of a circularity, which can't explain anything in itself. A tautology, a statement that is always true, is constructed via circular reasoning. Further below we will apply the principles of logics in the "formalist-substantivist" debate, to evaluate the validity and soundness of the proposed arguments.

The Object of Scientific Inquiry

Concerning the question of the object of scientific inquiry, the strong correlation between ontological and epistemological principles becomes apparent. The object of scientific inquiry covers anything that exists in the universe, be it of inorganic, organic or superorganic nature (Spencer 1996 [1873]). Thus, science doesn't differentiate between natural science and social science as laid out above. There only is one science that strives to uncover general laws of nature. As the *Homo sapiens* forms a part of the universe, it is subject to the same epistemological principles that are applied to any other phenomenon as well. Social reality is thus explainable through the principle of science, or, to paraphrase Auguste Comte, the study of human beings is perceived as "social physics" (Wagner 2001: 40). As Edward B. Tylor frames it: "(...) [I]f law is anywhere, it is everywhere" (Tylor 1924: 24). Hereby, we can detect a fundamental and irreconcilable difference between the epistemological principles of science and that of humanism, as the latter attributes human beings a particularity that is not to be grasped with the principles of science.

Humanities

The epistemological principle of humanities corresponds with the ontological perception of human beings as fundamentally different from laws of nature and thus not explainable in terms of science. Thus, on the epistemological plane, as humans hold a special, unique position which is reflected through the differentiation between nature and culture, we encounter a qualitative epistemological distinction between human beings, their surroundings

and non-human species. Humans are not subject to be perceived via the alleged naturalistic reductionism of science, but rather to be understood endogenously on their own terms. This humanistic approach dates back to the Era of Enlightenment and implies a political claim inasmuch as humans are ascribed unique value in the sense of the Humboldtian model of the autonomous individual, which itself presents to be a superstructural reflection of the capitalist system. It focuses idiographically on specific persons, societies or events, contextualised in time and space without broader generalisations. A harsh critic of humanities presents Leslie White who termed the expression: “An anthropocentric illusion” (White 1948). Humanities is thus criticised by epistemological scientists as anthropocentric, which in this context means an emic, self-referential view on humans and the detachment of human beings from the broader body of science which culminated in the division of faculties in science and humanities.

Postmodernism, Interpretivism and Constructivism: The Principle of Epistemological Relativity

The principle of postmodernism is characterised by relativistic epistemology. Human perception is socially constructed, the researcher making no exemption to this assumption. Thus, epistemologically relative principles emphasise the researcher’s own subjectivity in the research context and fundamentally question the possibility of objectivity in science as proposed in positivist/neo-positivist approaches. The criterion of objectivity gets replaced by a detailed reflection upon one’s own subjectivity, which shatters the foundation of the definition of science, as the researcher’s own subjectivity is included as part of the analysis.

“To deny the validity of etic⁶ descriptions is in effect to deny the possibility of a social science capable of explaining sociocultural similarities and differences. To urge that the etics of scientific observers is merely one among an infinity of emics (...) is to urge the surrender of our intellects to the supreme mystification of total relativism” (Harris 2001a: 45).

Objectivist science gets inter alia qualified as Western hegemonic discourse. Hence, the understanding of science gets expanded towards a pluralistic comprehension of epistemology, the aim of pluralistic approaches targets the disclosure of multiple realities, which are apprehended as social constructions.

“The essential vocation of interpretive anthropology is not to answer our deepest questions, but to make available to us answers that others, guarding other sheep in other valleys, have given, and thus to include them in the consultable record of what man has said” (Geertz 1973: 29).

⁶ For a definition of emic/etic see Subchapter *The Formalist and the Substantivist Principle*.

Ethnography is rendered a narrative in which the own situatedness in the field is contextualised. Accordingly, research results are not discovered, but in fact created by the respective researcher as a narrative.

“Note that this posture effectively challenges the traditional distinction between ontology and epistemology; what can be known is inextricably intertwined with the interaction between a particular investigator and a particular object or group” (Guba and Lincoln 1994: 110, emphasis in original).

Guba and Lincoln emphasise here the focus on a *particular* investigator and a *particular* subject of study. This emphasis reveals one of the central pillars in postmodernist thought. The striving for generalisations and the formulation of laws as well as broader comparisons over time and space are rejected by representatives of the postmodern principle in favour of contextualised small-scale ethnography that focuses on people of flesh and blood (“real” people which are otherwise left unseen behind generalisations and abstractions) and their diversity, aiming attention to their voices and life stories. The tenets of a postmodernist anthropology are thus founded in interpretative anthropology, the prioritisation of discourse and text analysis.

Theoretical Principles: Idealism and Materialism

The theoretical principle describes the principles of causality, i.e. the cause and effect relation between two or more phenomena. Thus, the theoretical principle is to be defined as the explanatory principle. The direction of causal mechanisms, i.e. the change of an element or phenomenon within a system, directly or indirectly affects other elements in that system (Blumauer 2012: 10). In this paragraph I will discuss the monist theoretical principles of idealism and materialism, as these principles predominate in the discourse in economic anthropology. In any case, idealism and materialism are not to be understood as an all-encompassing dichotomy, this understanding wouldn’t do justice to the diversity of theoretical principles. For the sake of completeness, dualist and pluralist principles as well as the systems approach shall hereby be mentioned; yet, they only played a marginal role in the theory formation surrounding *Homo economicus*. Hence, the idealist and the materialist principle are not meant to appear as a Procrustean bed, but as two prevalent answers among many to the question of causality. We can sort theoretical principles by type in two main categories, symmetrical and asymmetrical system theories, whereby the two theoretical principles we will elaborate here belong to the group of asymmetrical system theories, as they detect the causality for system change on one level that unidirectionally triggers further change on the

subsequent levels. Three levels are distinguished – the infrastructural, the structural and the superstructural level. A system's infrastructure comprises the environmental conditions, mode of production and the mode of reproduction, constituting a “demo-techno-econo-environmental” system (Harris 1994: 76). The structural level refers to a society's social organisation. The superstructure refers on the etic side to “human speech acts (...) and symbolic processes” (Harris 2001a: 52), on the emic side to the non-physical plane of ideas, meaning, norms, beliefs. Which level (infrastructural, structural or superstructural) however causes the system change depends on the respective theoretical principle. Idealism, as a theoretical principle, is grounded in the assumption that social change can be caused through superstructural impetuses. Phenomena are traced back to the superstructure of non-physical components, as for example the human “mind”⁷. Hence, structural change can originate endogenously from within a society, for instance through educational work and awareness campaigns. “Mind” is assumed to be imbued with the agency to act upon matter. Idealism on the theoretical level usually corresponds with the epistemological principle of humanities/postmodernism, but also has seen proponents on the science-side of the debate, e.g. in the Neoclassic paradigm or Evolutionary Psychology.. Diametrically opposed stands the theoretical principle of materialism which negates internally induced changes. Phenomena are traced back to physical components. Matter determines and dominates over mental processes. In order not to be misunderstood here, I'd like to clarify that even though asserting the infrastructural level the preeminent role, or dominance, is not to deny the influence of structure and superstructure. All aspects are interrelated and interact with each other, “(...) even though the roles played by each (...) [are] not equal in magnitude of influence” (White 1959a: 27).

“This theory [actually: principle] states merely that of the various classes of forces within a cultural system, technology [and infrastructure in general] is the basis and the motive power of the system. It does not assert that it is omnipotent, independent of conditions and subject to no limitations” (ibid.: 28).

According to the theoretical principle of materialism, structural changes first take place on the level of the material basis of the infrastructure. Changes in the infrastructure can further trigger changes in the social structure.

⁷ The term „mind“ will henceforth be set in quotation marks to indicate that it is a mere assumption with no empirical evidences for its existence. Also see Chapter 4 for further elaborations.

“If social institutions are shaped by the operation of technologies, then social change will tend to follow technological change. But the institutional response to technological change may not be immediate. Institutions have an inertia of their own” (ibid.: 21).

Pursuant to the theoretical principle of materialism, society is a conservative, self-referential system which is only subject to structural change through exogenous factors such as changes in technologies, environmental, demographic and economic conditions.

“The mode of production in material life determines the general character of the social, political, and spiritual processes of life. It is not the consciousness of men that determines their existence, but on the contrary, their social existence determines their consciousness” (Marx 1970, cited in Harris 2001a: 55).

Furthermore, materialism can also be framed in terms of biology, with a particular focus on the human brain and genetics. Consequently, we can differentiate between biological materialism and infrastructural materialism. People raised in a particular economic system, e.g. capitalism, act and think according to this system’s rules. It is not them who by their (e.g. individualist, self-interested, etc.) thoughts and behaviour form the economic system, but, on the contrary, the other way round. People adapt to the infrastructural conditions to function in the particular system. Discussing the respective principles, it is hence of uttermost importance to emphasise that the respective principle is embedded in a set of principles which together form a paradigm. Therefore, “the” materialism doesn’t exist, as materialism can have various meanings. As we have seen, in biological approaches, materialism is rooted in the physical aspects of the human body, whereas cultural materialism concentrates on the infrastructural level of the mode of production, the mode of reproduction and environmental circumstances. Likewise, idealism can be applied in different settings, as for example combined with methodological individualism in psychologist approaches focussing on the human “mind” as ultimate causality, or combined with methodological holism in the sense of a cultural determinism à la Alfred Kroeber, where the individual is subordinated to the cultural milieu, the “Superorganic” (Harris 2001b: 327).

Methodological Principles: Individualism and Holism

The methodological principle, orientated on how the questions about ontology and epistemology are answered, raises the question on how scientific knowledge can be attained. It is not simply a question of methods, but the frame of reference in which I put my object of study. Hence, the methodological principle constitutes the prerequisite in the choice of

method. Individualism and holism both describe two contrasting ways to approach a particular phenomenon. The underlying question is whether it is possible to deduce from the macro-level to the micro-level or the other way around? Are socio-cultural phenomena analysable on the basis of the individual as the unit of analysis? The methodological principle of individualism concentrates on the individual as paramount. Society and/or humanity is explicable and understandable through the analysis of its individuals or for instance the individual psyche or an individual's genes, depending on the research approach. Thus, socio-cultural phenomena are traceable back to an individual's characteristics, e.g. psychological dispositions, and consequently the analysis of the individual allows to infer to group phenomena. On the other hand, the methodological principle of holism doesn't take individuals into account. Methodological holism analyses society not in terms of individuals, but as a whole, following the psychologist Kurt Koffka's maxim "The whole is *other* than the sum of the parts" (Metzger 1975: 6, emphasis – KR.). The emphasis on the whole being *other* (not more) than the sum of its parts stresses that the whole isn't simply more and unchanged, but rather presents a change in quality with entirely new characteristic. Methodological holism thus considers the phenomenon of emergence, whereby broader mechanisms and regularities arise through the interaction of individuals that themselves do not demonstrate these characteristics. The unit of analysis therefore is not an individual person, but institutions and their interdependence which are not reducible to individuals. Individuals are exposed to social determinism, it therefore only makes sense to investigate the broader processes that govern society, the individual him-/herself can't give an account of these processes, as they mostly remain latent and unrecognised by the individual. Only an analytical macro-perspective can disclose society's underlying mechanisms by abstraction from individual experience.

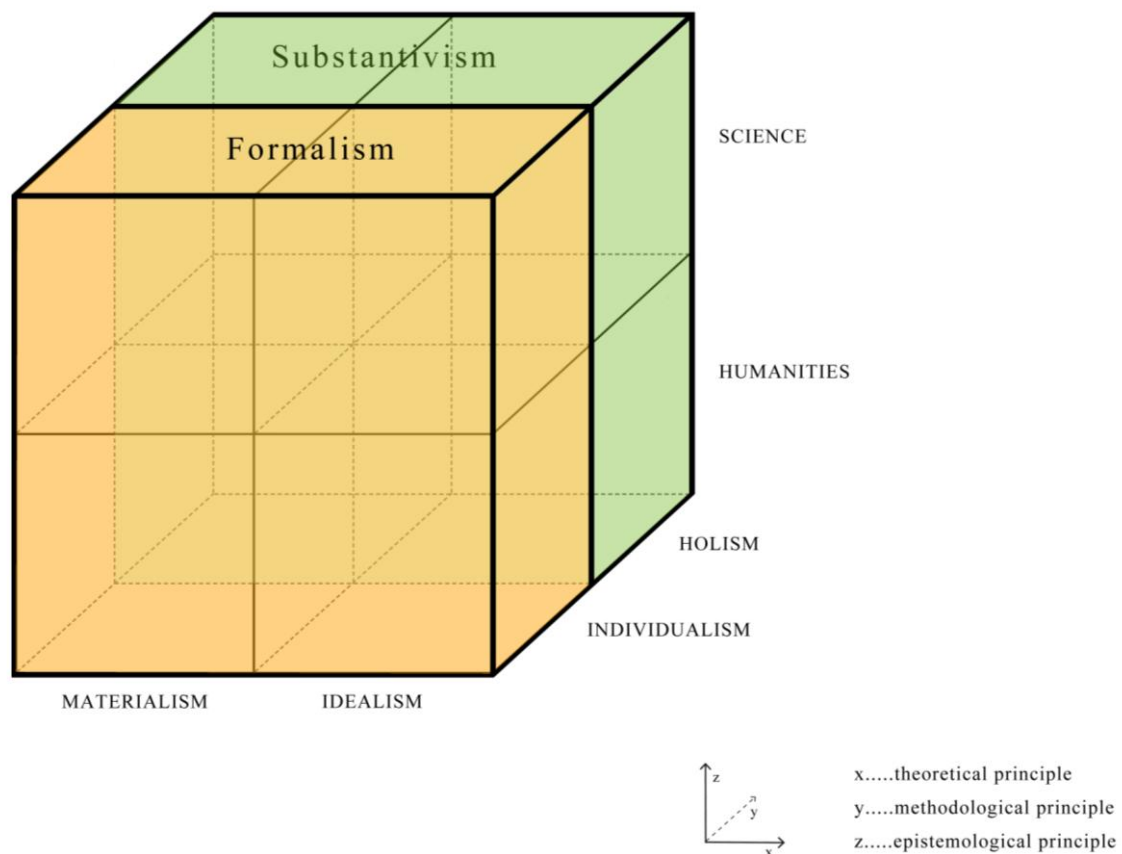
The Formalist and the Substantivist Principle

The formalist and the substantivist principles are subcategories of methodological individualism and holism respectively. To specify, the formalist principle is a subset of methodological individualism, hence every formalistic approach is by definition also individualist – the inversion of the argument is however not feasible, as the formalist principle only presents a particular case (a subset) of methodological individualism. The same holds true for the logical relation of the substantivist principle and methodological holism; the substantivist principle presents a specific subset of methodological holism. It should be mentioned in advance that the terms "formalism" and "substantivism" actually constitute

methodological principles and not paradigms, even if the suffix “-ism” might falsely lead to that conclusion. The suffix “-ism” is readily and inflationarily used, especially in the context of the so-called “Formalism-Substantivism” debate. I will further apply the denomination formalist/substantivist principle. If however “formalism/substantivism” is used in order to describe the debate triggered by Karl Polanyi or in citations, what is actually referred to is the methodological principle.

The following graphic illustrates that formalism/substantivism can (but not necessarily do) occur in the depicted combination of principles. Formalism/substantivism are possible, but not necessary subsets of the methodological principle of individualism/holism, respectively.

Graphic 1: Formalism-Substantivism



The formalist principle consists of two elements. First, the separation of elements, like the detachment of economy from a social system. Second, the transfer of a particular element to a new context, for example a different social system. Thus, the formalist principle refers to taking an element from a certain context and applying it (the form) to other contexts. However, the same form does not automatically follow the same function. The formalistic

fallacy sees the confusion of the comparison of the same form with the identification of the same function.

“A ‘formalist’ approach emphasises the regular operation of ideas, in this case the universal claims of neoclassical economics; while a ‘substantivist’ approach gives priority to the empirical content of material circumstances and disputes that this diversity can be adequately grasped through just one set of concepts” (Hann and Hart 2011: 57).

As this citation by Hann and Hart points out, the substantivist principle, as its name already gives away, is concerned with the substance, the tangible empirical contents of social systems. Particular emphasis is given to the system concept, whereby a system can’t be dissected into individual components, but is rather characterised by its interrelation and complex interaction of a multiplicity of factors.

Another aspect of the formalist-substantivist distinction sees the application of the conceptual tools of emic and etic on the epistemological level. First introduced by Kenneth Pike (1954) as neologisms stemming from the terms phonemics and phonetics, phoneme refers to a unit of sound in a particular language, while phonetic describes universal sounds regardless of their meaning. Most influentially picked up and applied to anthropology by Marvin Harris (1976, 1994 and 2001a), emic hence signifies culture-specific and context-related knowledge, bound by a particular socialisation, whereas etic applies to scientific knowledge independent of a particular context⁸. So how does emic/etic logically relate to the differentiation of formalist-substantivist? Formalistic approaches do not make the distinction of etic and emic and impend to succumb to an ethnocentric Western emic by assuming the WEIRD perspective (Henrich, Heine and Norenzayan 2010). WEIRD hereby constitutes an acronym which stands for Western, Educated, Industrialised, Rich and Democratic, and describes the ethnocentric tendency in academia to assemble evidence in this particular – WEIRD – context and applying it to humanity at large. This cardinal aspect will recur repeatedly below in the delineated controversy surrounding the “formalist-substantivist” debate in economic anthropology.

1.3. Incommensurability of Paradigms?

Thomas S. Kuhn has postulated the mechanism of how paradigms relate with each other in *The Structure of Scientific Revolutions* (1962). His postulate of incommensurability goes back to mathematics where it describes cases where two mathematical quantities have no common

⁸ For an elaborate discussion of emic/etic see Begemann (2016) and Harris (2001a).

unit system of measurement (Wiltsche 2013: 160f.). In the philosophy of science, commensurability on the other hand, designates a concept where scientists share a paradigm and therefore common guidelines and nomenclature. If scientific theories are commensurable, it is possible to compare them and examine their usefulness or validity in comparison with each other. On the contrary, incommensurability, applied to the level of paradigms, aims at the incompatibility of semantic, methodological and ontological aspects. We shall add here the theoretical principle, which is not mentioned in Kuhn's *Structure*. The semantic incommensurability, as aforementioned, refers to the fact that scientist with different paradigmatic positions might use the same vocabulary and terms, however, with a different understanding and interpretation of the term. The methodological and ontological principles have been already elaborated above. Hence, in relation with each other, paradigms are mutually exclusive, an essential characteristic which is designated as incommensurability of paradigms. Thus, we can speak of an incompatibility of paradigms with each other, as well as of fault lines (Silverman 2005: 331). Scientific controversies usually mirror this incommensurability if the controversy is informed by opposing paradigmatic positions, as opposing parties with different paradigms tend to talk past each other, reflecting the underlying divisions.

According to Kuhn, a scientific community shares a certain paradigm, or in his words, a scientific worldview that expresses itself through shared standpoints, standards, guidelines and norms; an implicit complex of intertwined theoretical, methodological and ontological beliefs that facilitate selection, evaluation and criticism of a legitimate scientific problem (Kuhn 2014 [1962]: 31). This phase of a common disciplinary matrix (Gabriel 2004: 10) is what Kuhn calls "normal science". If over time a paradigm doesn't produce any sustainable theories and its theories are incapable of explaining a certain phenomenon, science undergoes what he terms a "scientific revolution", a paradigm shift towards a new paradigm that supersedes the previous paradigm. In social and cultural anthropology however, we can't locate the replacement of an old paradigm with a new one, no dissolution of an unfruitful paradigm in favour of a new one. Today's social sciences (in terms of the division of academic faculties) are characterised by a constant reformulation or new formulation of a paradigm and at the same time a simultaneous persistence of fruitless and sterile paradigms (ibid.: 9). Hence we can't speak of Kuhn's understanding of paradigm shift in the social sciences. This is because we can detect the coexistence of paradigms or "multiparadigmatic" stages (Gabriel 2004: 9). Instead of the replacement of a paradigm through a new one, various

different paradigms persist parallel to each other. This pluralism of paradigms leads to an ontological as well as epistemological relativism in social sciences. The question raised by the coexistence of paradigms is eventually, if it is possible to find a common neutral ground for certain objective standards of rationality in order to compare the quality of paradigms with each other; a concern, which is negated by relativists such as postmodernists and constructivists which deem it impossible to find an Archimedean point (Kuhn 2002a: 95). Notwithstanding the relativists' dissolution of science, a more productive strategy seems to admit to certain standards of rationality, independently of paradigms. That is, characteristics such as accuracy, inner and external logical consistency, the possibility of operationalisation, simplicity in the sense of Ockham's razor as well as fruitfulness. Through a common and stable "quasi-ontology" of the fundamental concepts in science (Gabriel 2004: 12), independently from the respective paradigmatic position, it might be possible to evaluate and rank paradigms according to their scientific merit, and even refute fruitless paradigms. So how could we go about such an undertaking, if paradigms themselves are not falsifiable?

Comparability of Paradigms and the Criterion of Falsification

Paradigms and principles are per definition not subject to falsification. As briefly addressed above, principles or whole paradigms are deemed not falsifiable as they consist of assumptions on the ontological, epistemological, theoretical and methodological level. Anomalies in scientific research usually don't affect the underlying principles. The paradigm itself appears to be immune to anomalies (Kuhn 2014 [1962]: 90, 93f.). Guba and Lincoln maintain the following:

"(...) [P]aradigms, as sets of basic beliefs, are not open to proof in any conventional sense; there is no way to elevate one over another on the basis of ultimate, foundational criteria"
(Guba and Lincoln 1994: 108).

Informed by a constructivist perspective, they argue that as paradigms are necessarily human constructions, and no construction by its very definition can be arguably right, no paradigm by itself can comply with the criteria of true and false. "(...) [A]dvocates of any particular construction must rely on *persuasiveness* and *utility* rather than *proof* in arguing their position" (ibid., emphasis in original). I certainly disagree with this statement, as paradigms are – again – not "ships that pass in the night" (Harris 1994: 63). Even though a paradigm consists of a set of not falsifiable assumptions, it doesn't necessarily mean that we can't say anything at all about the paradigm's explanatory power, on the contrary. To analyse the

scientific merit of a paradigm, we have to go on the level of the theories stemming from its paradigmatic position. Evidence-based theories stemming from a certain paradigm can indicate the scientific quality of the underlying paradigm. It is therefore possible to compare paradigms indirectly via the theories they produce, provided that the theories fulfil scientific standards, as laid out in above. If scientific theories stemming from a certain paradigm are constantly being falsified or do not lead to any scientific results at all, we might take this as an indication to fundamentally challenge the underlying paradigm that informs these theories. Therefore, theories can falsify a principle indirectly. The more (not yet falsified) theories stemming from a certain paradigm, the more fruitful this paradigm appears to be. The more theories stemming from a certain paradigm get falsified, the more that particular paradigm seems to be unsuitable and might be refuted. However, this has to happen systematically. If just one theory stemming from that paradigm gets falsified, this doesn't lead automatically to the refutation of a whole research program, the paradigm still can be true. Even if Darwin's theories were falsified, the underlying principle of evolution continues to bear fruits until present. Nevertheless, if the paradigm doesn't seem to produce any theories at all that can withstand the criterion of falsification, the logical step is to abandon this paradigmatic position and look for a more fruitful paradigm. The theory-level therefore can provide us indirectly with information about the subjacent level of the paradigms. Kuhn's paradigm shift sets forth a similar argument by asseverating that the claimed immunity of a paradigm (to falsification) has its limits. As soon as empirical difficulties arise and remain constant, recurring over a longer period of time, the underlying paradigm's credibility, or rather quality, is questioned (Büttemeyer 2014: 148f.). Even if the social sciences today proud themselves with their diversity and coexistence of multiple paradigms, I am strongly advocating for the application of the criterion of falsification in scientific theories that allow us to draw conclusions about the underlying paradigm and their explanatory power. Nevertheless, falsifying a certain theory does not automatically lead to the refutation of a whole paradigm, this we would call naive falsification. Popper might argue that the falsification of a single theory also hits the system it was deduced from (Popper 1994 [1934]: 8). However, only continuous anomalies in theories stemming from the same paradigm do de facto lead to a crisis that might result in the paradigm's rejection. This is however only the case, if the theories stemming from a certain paradigm actually get subjected to thorough analysis according to scientific criteria that might lead to falsification, an undertaking, which has decreased in the times of postmodernism, especially in the so-called social sciences.

Category System – Framework of Analysis

Taken the discussed principles together, ontology, epistemology, the theoretical level and methodology, they present the category system that will be applied in the following analysis on the question of human behaviour and its implications for economic anthropology. We will dissect the respective paradigmatic angles in the “formalist-substantivist” debate and identify the underlying principles, compare them with other approaches and assess their explanatory power. After the analytic work, I hope to present a convincing synthesis and evaluation on which paradigmatic approach seems most suitable to produce fruitful and sustainable theories. It is worthwhile noting that the presented framework of analysis is applicable on any phenomenon and not limited exclusively to economic anthropology.

2. A Debate in Principle: The Formalist-Substantivist Controversy

2.1. Introduction

What is the formalist-substantivist controversy about? First of all, it is a theoretical controversy by principle, a discussion belonging to the realms of philosophy of science. As we have just elaborated in the previous chapter, formalist and substantivist approaches are subcategories of methodological individualism and holism, respectively. The debate unfolds itself along specific fault lines that can be traced back to their underlying principles. We will detect these principles and their interdependencies to explain the hidden logic behind the debate and tackle the question of why certain paradigms reinforce each other, while others are at odds. The present controversy will provide a basis for the re-examination of broader underlying fault lines which are not arranged in a dichotomous way, but embedded within a mesh of principles that form competing schools of thought, “(...) and in the process compel us to rethink basic considerations of man and the social, assumptions about rationality, the nature of economy, and the mechanisms of social transformation” (Prattis 1982: 206). We will scrutinise competing paradigms and evaluate which set of principles has produced fruitful theories and which one has remained sterile in the explanation of social phenomena and human behaviour.

What is the controversy not about? It is not a debate regarding a certain topic or a certain discipline. It is not a discussion limited to economic anthropology. The question underlying this theoretical discussion is how social phenomena and human behaviour in general can be understood and explained. In our example, we will focus on human behaviour in the economic sphere. It is, however, not solely limited to that area. The general question regarding human behaviour is whether we can detect universal behavioural traits or whether there are cultural differences. And if so, how and in which theoretical framework can these differences be accounted for? The discussion is applicable to any social phenomenon, as for example the question and interpretation of human language(s) and its grammatical structure(s)⁹.

⁹ The reason why I make a distinction between the singular and the plural here, is that formalistic approaches postulate *one* (singular) common grammatical core structure in human language, whereas substantivist approaches do argue for its universality, thus maintaining the existence of several (plural) grammatical structures in human languages.

Universal Grammar or Cultural Tools? – A Formalist and a Substantivist Approach to Language

I will illustrate the applicability of the formalist-substantivist scheme independent of the subject matter with the example of language, as it is not limited to economics, although made famous through the controversy in this field. A formalistic interpretation to language postulates the universality of a number of core grammatical structures in all human languages. This formalistic universalistic school argues that there exist grammatical structures independent from their respective meaning and cultural context, which underlie all manifestations of human language. “(...) [T]hese components are part of our genetic endowment as *Homo sapiens* (...)” (Everett 2007: 297). Evidently, this approach takes as its starting point in a biologicistic deterministic manner¹⁰ the *Homo sapiens*’ brain and universal brain structures. As, by ontological definition, *Homo sapiens*’ physical endowments are a species-specific feature and all humans hence must fundamentally think in the same way due to their shared genetic make-up, there have to be detectable universals in all languages, a universal human grammar, or Universal Grammar (UG). The essential feature underlying the postulated UG is argued to be recursion. “In its application to linguistics, it [recursion] implies that one unit (word, phrase, or sentence) appears in another unit of the same type” (ibid.: 298), enabling the speaker to form endless sentences that refer back to aforementioned units. The propensity of a shared common grammar is seen as innate and thus independent from socialisation. This line of reasoning is most illustriously represented by Noam Chomsky (2002). The formalist element is insofar given by this approach, as it takes one grammatical feature of a particular language, isolates it from its cultural context and applies it independently from this context to human languages in general. The substantivist counterarguments to the formalist claim of the universality of human grammar, show that languages cannot be analysed independently from their context. Languages represent cultural tools of a particular social system and are constrained through the very socio-cultural system they are embedded in. Their grammar can only be explained through the methodologically holistic analysis of the socio-economic-ecological system of a society. Languages as cultural items represent a function of a wider systemic framework. An example for this position and a falsification of the postulated universal grammar is the case of the Pirahã people, set forth by Daniel Everett (2005; 2007; 2016), an anthropological linguist. In a nutshell, based on his fieldwork among the Pirahã, Everett argues that the Pirahã lack recursion, thus challenging the claimed innate grammatical structure of *Homo sapiens*. He argues that human languages

¹⁰ For further elaborations, see Chapter 4.

and grammar are constrained by their cultural embedding and serve as a function of the socio-cultural system. At the time of Everett's studies, the Pirahã lived as monolingual hunter-gatherer society in the Amazon rainforest in Brazil. In a materialist explanation (although not set forth by Everett himself¹¹), the Pirahã egalitarian social organisation constitutes an expression of their egalitarian economic system. The principle of immediate return in their economic system has its reflection as the principle of immediate experience in the Pirahã's culture, and, as a function of their cultural system, also in their grammar. The immediacy of experience emphasised by Everett in the Pirahã context explains how and why language is determined by its socio-cultural-economic context.

"I next argued that all of these facts [inter alia the lack of recursion] followed from a Pirahã cultural constraint that I termed the 'immediacy of experience' constraint: declarative Pirahã utterances contain only assertions related directly to the moment of speech, either experienced (i.e., seen, overheard, deduced) by the speaker or as witnessed by someone alive during the lifetime of the speaker" (Everett 2007: 298, emphasis in original).

Accordingly, Everett disproved the claim of the universality of recursion, i.e. the grammatical ability to form endless sentences with subordinate clauses that refer to the main clause, by showing that in Pirahã language there is no evidence for the use recursion in their grammar. Through their immediacy of experience, they do not need it due to the aforementioned cultural constraints. "(...) [T]his was evidence that culture could indeed be causally implicated in grammars, playing even an architectonic role in shaping grammars as wholes" (ibid.). This evidence proved to be incompatible with the UG of the Chomsky-school, falsifying its universal claims. The substantivist approach to language thence takes into account the embedding of a certain element, in this case, language, in its wider socio-economic-ecological frame; while a formalistic approach argues that the respective milieu has "(...) very little, perhaps nothing, to do with the [presumed] core components of these [assumed] genetically grammatical principles, labelled Universal Grammar (UG)" (ibid.: 297).

Through this example, we hope to illustrate the applicability of the theoretical framework surrounding the formalist-substantivist debate to any social phenomenon. It thus cannot be emphasised enough, that the following debate in economic anthropology constitutes a mere example for formalist and substantivist reasoning respectively, that has further implications on

¹¹ Everett remained in his explanation on an idealist theoretical level emphasizing the immediacy of experience principle, but not tracing it back to the immediacy of return principle on the material level.

the ontological, epistemological and theoretical level and constitutes a fundamental question regarding the philosophy of science.

Let's Talk About the Economy

As defined in Chapter 1, the formalist and the substantivist principle present subcategories of methodological individualism and holism, respectively. In economic anthropology, they have been used to designate the “formalist-substantivist” controversy, which was triggered by Karl Polanyi’s distinction of the term “economic” in a formalist, as well as substantive meaning.

“The two root meanings of ‘economic’, the substantive and the formal, have nothing in common. The latter derives from logic, the former from fact. The formal meaning implies a set of rules referring to choice between the alternative uses of insufficient means. The substantive meaning implies neither choice nor insufficiency of means” (Polanyi 1957: 243).

“[The substantive meaning] (...) refers to the interchange with [a person’s] (...) natural and social environment, insofar as this results in supplying him with the means of material want-satisfaction” (Polanyi 1968: 139).

We can already see from this definition, that formalistic and substantivist approaches to economy aim at explaining different aspects. While formalists look at behaviour in situations of choice, substantivists focus on institutions and their interrelations.

“It is clear from the foregoing discussion that formalists and substantivists operate with two entirely different definitions of the economy. (...) The definition of the economy is critical here because it determines the theoretical problems one investigates, which facts the analyst chooses to include, and the units of analysis” (Prattis 1982: 216).

Polanyi’s distinction sparked off an already glowing fire, which wasn’t new to the discipline of economics with its preceding dispute over methods in the late nineteenth century between the Austrian School of marginal utility and the German Historical School or its institutionalist attacks on orthodox economics in the 20th century (Kaplan 1968: 229). Polanyi’s analysis of the term “economic” and its wider implications led to a heated debate in the late 1950s until the early 1970s with mainly the participation of anthropologists and economists¹². The controversy itself however had its precursors already in the beginnings of the establishment of the economic discipline, as we will shortly discuss below. The subsequent heated debate divided itself in two camps, the so-called “formalists” and the “substantivists”. As discussed

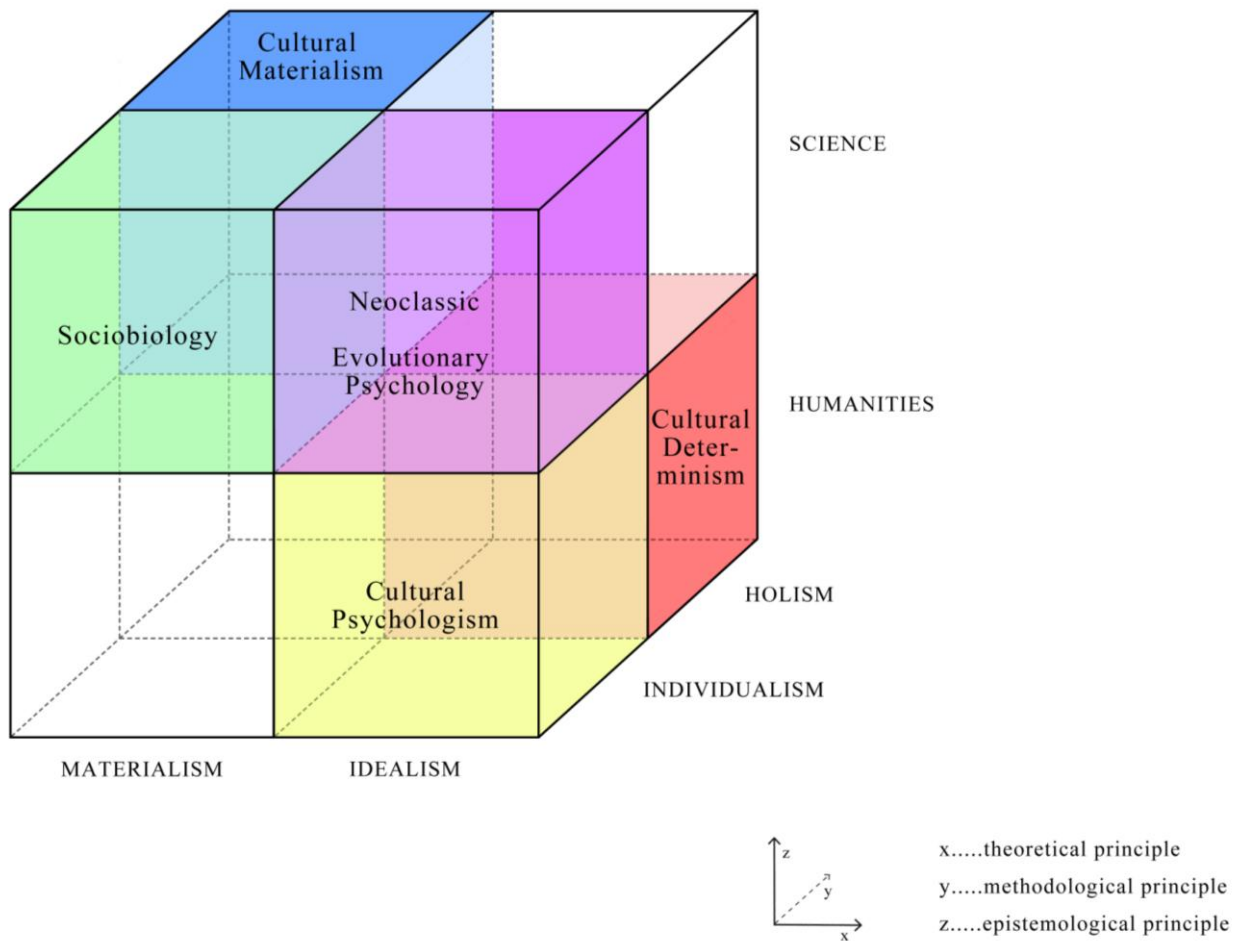
¹² The controversy is however not a question of disciplines, but of principles, as we will set forth below.

in the *Preamble*, the use of these terms is misleading, as they suggest a uniform formalist and substantivist side in the discussion. However, this is not the case. “The” formalist and “the” substantivist simply do not exist due to the fact, that the formalist and the substantivist principle are embedded in a wider set of principles that only together form the respective paradigm. If the terms “formalist” and “substantivist” are therefore used in the following chapters, we have to exercise caution and bear in mind that this designation merely refers to a subset of the methodological principle. According to Prattis, the controversy was mainly a methodological dispute (Prattis 1973b: 46), we will show however, that the debate actually involved more than the methodological level, but sees its fault lines also on the theoretical, epistemological and ontological level.

How Do Paradigms Relate to Each Other in Principle: An Illustration of the Theoretical Framework

If the formalist principle is defined as a subset of the methodological principle of individualism, and the substantivist principle as a subset of methodological holism, why can we not speak of “the” formalists and “the” substantivists? As discussed in Chapter 1, the methodological principle is only one of several sets of principles that form a paradigm.

Graphic 2: Paradigms



We can see from Graphic 1 *Paradigms*¹³, that formalist reasoning, as a possible, but not necessary element of methodological individualism, extends itself to a combination of various principles that form the paradigms of *Sociobiology*, *Neoclassic Evolutionary Psychology* and *Cultural Psychologism* (more commonly known as Cultural Relativism¹⁴). The substantivist principle, as an element of methodological holism, supports *Cultural Materialism* as well as *Cultural Determinism*. All these paradigms conform to each other according to some principles, and contradict each other according to others. For example, the Neoclassic paradigm and Cultural Psychologism are both constituted by methodological individualism (therefore possibly containing formalist elements, as we will set forth below), and theoretical idealism. Only on the epistemological level, they differ from each other. What do these combinations of principles mean regarding their compatibility and mutual strengthening?

¹³ This graphic is not of comprehensive character, thus not including all possible principles and paradigms, but focussing on the dominant paradigms concerning the controversy set forth here.

¹⁴ The designations “Cultural Psychologism” and “Cultural Relativism” will hereinafter be used synonymously. More commonly known as “Cultural Relativism”, the author prefers the usage of the more exact term “Cultural Psychologism”, as the designation of a paradigm usually refers to its theoretical principle.

Psychological reductionism, for instance, is a particular form of idealism, where the human psyche, or the human “mind”, is detected as the ultimate explanatory cause in the analysis of phenomena. Combining psychologism with the methodological principle, we can distinguish between the Holistic-Idealism of Cultural Determinism à la Kroeber with individuals subordinated to cultural patterns (red cube), and Individual-Idealism of Cultural Psychologism (or Cultural Relativism) à la Boas and Benedict (yellow cube), and the Neoclassic paradigm dominating the sphere of economics (purple cube). As we can see from the overlapping of the theoretical principle as well as the methodological principle, the individual-psychologist paradigms of Neoclassic and Cultural Psychologism strengthen each other mutually through the compatibility of a combination of their underlying principles. Sociobiology (green cube) and Neoclassic play well along with each other through their orientation towards methodological individualism as well as the epistemological principle of science. Why and how these combinations and interrelations become important in the course of the debate, will be subject of this analysis. Keeping the relationship of the aforementioned paradigms in mind, let’s turn to the formalist-substantivist debate how it unfolded itself in the realms of economic anthropology.

Embedded Institutions vs. Rational Choice: A Substantivist and a Formalist Definition of Economics

In this chapter, our focus lies upon the formalist-substantivist debate in economic anthropology. Before immersing into the debate with a particular emphasis on its paradigmatic foundations, first, we have to get a clear understanding of the term “economy” and the economic context of social activities. Applying the formalist-substantivist distinction to economic anthropology, Marshall Sahlins presents the controversy as a strong dichotomy.

“ ‘Formalism versus substantivism’ amounts to the following theoretical option: between the ready-made models of orthodox¹⁵ Economics, especially the ‘microeconomics’, taken as universally valid and applicable grosso modo to the primitive societies; and the necessity – supposing this formalist position unfounded – of developing a new analysis more appropriate to the historical societies in question and to the intellectual history of Anthropology. Broadly speaking, it is a choice between the perspective of Business, for the formalist method must consider the primitive economies as underdeveloped versions of our own, and a culturalist

¹⁵ “Orthodox” economics refers to standard or mainstream economics which is largely Neoclassic economics as well as the “neoclassical synthesis”, i.e. the integration of Keynesian macroeconomics within the framework of neoclassical microeconomics. Orthodox economics stands in contrast to heterodox economics which is a multitude of various approaches that find themselves outside the widely accepted framework of mainstream economics.

study that as a matter of principle does honor to different societies for what they are”
(Sahlins 1972: xi-xii).

Business, in this reading, refers to the gradualism occurring in formalistic approaches, where non-market economies only gradually differ in their complexity from capitalist systems. The culturalist approach here stands for a more encompassing outlook characteristic for substantivist approaches. Karl Polanyi himself discusses two definitions of “economic”, a formalist and a substantivist definition that so often get confused and blurred in debates, resulting in opponents talking at cross purposes. “The first refers to a means-end relationship, the mental process of economising, whereas the second is concerned with the general provisioning of material wants on society” (Hann and Hart 2011: 56). We therefore have to disentangle the various understandings of “economic” in order to avoid linguistic inaccuracies. Polanyi understands the term “economy” plainly as the material livelihood of man. Following this line of argumentation, on the one hand, in its material, substantive definition, “economic” refers to the dependence of human beings on nature and other humans in context of their livelihood. On the other hand, in its formal-logical definition, “economic” corresponds to a relation between ends and means which is described in terms of economic efficiency according to the principles of frugality and austerity. Rational action is seen as in compliance with this formal definition of “economic”. Rational behaviour is hereby defined as the “(...) consistent maximization of a well-ordered function, such as utility or profit function” (Becker 1976: 153). Economic rationalism understands human action as being “economic” *sui generis*.

“As long as the activity involves the relinquishment of other desired alternatives, it is economic. In this view all social action can be viewed as economic (...). It follows that any decision can be economic, and thus, the problem of defining a sphere of economic activities of decision disappears” (Prattis 1982: 217).

Polanyi finds fault with this uncritical, inflationary usage of the formalistic definition of “economic”, as any action of indigenous communities concerning their material livelihood would automatically be understood as a kind of “primitive capitalism”, without qualitative distinction. The material, substantive definition of “economic” doesn’t presuppose the necessity of choice and scarcity of resources, whereas the formalistic definition does imply these characteristics. Further, only the substantive definition serves as reference frame for Polanyi’s undertaking of the scientific analysis of modern and ancient economies as it does justice to their particular features. The substantive definition of “economic” is directly derived

from empirical economies themselves, which Polanyi defines as interdependent institutions and processes between humans and their material environment that serve the purpose of the satisfaction of material needs. Economy, according to Polanyi, therefore is to be understood as a process embedded in institutions. Activities can be called “economic” if they partake in this process. Every element in either process or institution serving the satisfaction of material needs in the interaction between human and environment is therefore to be denominated “economic”. Yet, “economic” doesn’t imply exclusivity by definition, since as “economic” defined elements always overlap with other areas such as ecological, technological or sociological spheres. (Polanyi 1979: 209ff.)

In a substantivist approach, the economic (structural¹⁶) system cannot be analysed as a category on its own terms, as cultural characteristics penetrate all levels of society. We thus have to turn to an integrative understanding that permeates all aspects and layers of a society, embedding the economic (structural) system in a wider cultural system. “[Substantivist] (...) economic anthropologists tend to situate things like markets or other forms of circulation, or production or consumption [as mere sub-sets of economic life], in larger social and cultural frames” (Carrier 2005: 4).

“(...) [O]ne cannot tell by looking at it, or by any other kind of examination, whether a given event is economic or not. Is this an economic event? Suppose that A gives B an arrow and B gives A a string of beads in return, is the transaction an economic one? The answer is, it all depends... (...) Whether an event is economic or not depends upon the context in which we appreciate its significance. (...) But what is an economic context? (...) First of all, it must be sociocultural in character. Secondly, it involves the appropriation of things from the external world. Thirdly, these things are used to satisfy a need of human beings. And finally, human energy must be expended in making these things available for human consumption” (White 1959a: 237f.)

A core characteristic of an economic context is that it is per definition cultural.

“Economic behavior is social as well as cultural. It is a process of interaction among persons; the Robinson Crusoes (...) have no economic life. Merely picking and eating wild berries, or catching a fish and eating it, is not to be reckoned an economic activity: monkeys can pick berries, and otters can catch fish. Economic, then, by definition, must be both social and cultural” (ibid.: 238, emphasis in original).

¹⁶ Structure is added here in brackets to emphasise that this discussion takes place on the structural level of a society, also see below.

Having defined what an *economic context* is and what it is not, what is an *economy*? “An economy is a set of institutionalized activities which combine natural resources, human labor, and technology to acquire, produce and distribute material goods and specialist services in a structured, repetitive fashion” (Dalton 1969: 97). The focus in this definition by substantivist George Dalton lies on the economic organisation, i.e. the set of institutions that structure the way in which people engage in economic life. “Economic life is the activities through which people produce, circulate and consume things, the way that people and societies secure their subsistence or provision themselves” (Carrier 2005: 3). The manner in which economy hereby is defined reverberates the substantive approach.

To be clear: This focus on the economic organisation adheres to the question of the structure of a society. When discussing topics related to the economy of a society, it is essential to understand on which level the discussion is taking place, as the meaning of the term easily gets blurred due to its polysemy. Let’s recall the distinction of social structure and infrastructure outlined in Chapter 1. The infrastructure of a society is defined as the demo-techno-econo-environmental basis. The mode of production is thereby specified as “(...) [t]he technology and the practices employed for expanding or limiting basic subsistence production, especially the production of food and other forms of energy, given the restrictions and opportunities provided by a specific technology interacting with a specific habitat” (Harris 2001a: 52). On the structural level, we can identify the economic organisation of a society, its domestic and political economy. The domestic economy is the “(...) [t]he organization of reproduction and basic production, exchange, and consumption within camps, houses, apartments or other domestic settings” (ibid.), while the political economy consists of “(...) [t]he organization of reproduction, production, exchange, and consumption within and between bands, villages, chiefdoms, states, and empires” (ibid.: 53). Regarding thus the social structure, the analytical focus does not lie on the infrastructural characteristics as the mode of subsistence or production or the mode of reproduction themselves, but rather on the way in which a population involved in production and reproductive activities organise themselves around these practices. The reason why it is parsimonious to distinguish between economy as infrastructure and economy as structure is that the economic organisation on the level of the social structure is the result of the constraints posed by a particular type of infrastructure (Harris 1993: 238).

“It is true that production and reproduction cannot proceed without the organizational components of the economy. (...) [H]owever, major transformations in the economic organization of social life do not occur randomly, but in response to infrastructural

conditions characteristic of particular modes of production and reproduction” (Harris 1993: 238f.).

In the subsequent discussion, what is thus meant when debating the substantivist position of an embedded economic system in the broader societal structure? It means in effect that the economic organisation (i.e. domestic and political economy) is part of the social structure and cannot be analysed in isolation.

The ambiguity of the terms “economic” is the reason why it is of uttermost importance at this moment to bear in mind the differentiation of on the one hand the economic organisation as part of the social structure and on the other hand the infrastructural level of the mode of production and reproduction. At this point, a brief annotation is required: The definition of the mode of production employed in this thesis differs from the Marxian notion. The Marxian mode of production refers to the structural economic and social organisation which in our definition here pertains to the structural level, while the mode of production set forth in our argumentation applies to the infrastructural plane (Elwell 2013b).

By this means, a noteworthy aspect is that the motivations that underlie these economic activities are completely set aside by this substantive definition. The analysis of choice and the kinds of decisions people make refers to another definition of “economic”, namely the formalist definition of “economising”, as we will discuss below.

Formalistic approaches “(...) extended the logic of rational egoism to settings where the substantivists held this to be inappropriate, since reciprocity and redistribution were the dominant forms of integration there rather than impersonal markets” (Hann and Hart 2011:66). A formalistic approach towards economic anthropology typically reinterpreted the ethnographic material used by substantivist lines of argumentation which opt for the embeddedness of the economy in social contexts. The formalistic reinterpretation of this material confirmed the “(...) neoclassical assumption” (ibid.). Melville Herskovits argues that Neoclassic economic categories could be applied to “non-machine societies” (ibid.: 64), whereas “Robbins Burling (...) was adamant that anthropologists needed to acknowledge the universality of choice-making and maximization” (ibid.: 66). The controversy thus unfolded around the question whether (Neoclassic) economics could be applied to the anthropological domain. “[Formalistic approaches] (...) identified economic life in terms of the sorts of mental calculus that people use and the decisions they make (for example, utility maximisation), which stresses the form of thought of the person being studied” (Carrier 2005: 4). Substantivist positions typically criticised the Neoclassic assumption that scarcity was a

general factor in all human behaviour, arguing that for example hunter-gatherers were “original affluent societies” that didn’t know scarcity (Sahlins 1972). In turn, formalists would argue that hunter-gatherers “(...) were maximizing their leisure options, given the opportunities open to them. The neoclassical premise of ‘revealed preferences’ allowed them to claim that whatever consumer choices people made, they were surely maximizing their individual utility” (Hann and Hart 2011: 67). This argumentation was based on general utilitarianism, the open concept of utility which, as we will later discuss, presents a tautology in itself.

“The real break in the conversation, I would suggest, came after the 1960s, when economists took a hard turn away from the comparative study of institutions and toward an increasingly exclusive focus on decontextualized formal model-building. (...) Having turned the cultural and institutional assumptions of their own society into universalistic theoretical axioms, contemporary economists appear to have lost all purchase on (...) the different cultural and institutional arrangements that modern economic anthropology has sought to explore and explain” (Ferguson 2000: 995).

At the present moment, after taking at cross purposes for decades, formalist economics and substantivist economic anthropology seem not to have much more to talk about. Why their position were never meant to reconcile will become clear in the subsequent analysis of the underlying principles in the discussion.

2.2. *Formalist Explanatory Approaches*

The Economic Foundations of Homo Economicus – From Classic to Neoclassic Economic Theory

The classic and from the second half of the nineteenth century onward, the Neoclassic economic school still shapes the basic assumptions in economics until today. For the present analysis, it is indispensable to understand these underlying assumptions to fully grasp their influence on the “formalist-substantivist” controversy. “(...) [The] ‘formalist’ responses to Polanyi and his school (...) amounted to a restatement of mainstream positions in neoclassical economics” (Hann and Hart 2011: 56). As we are about to analyse the formalist-substantivist debate in economic anthropology, let us briefly turn to the economic foundations that govern the formalistic position in order to understand the underlying principles in this debate. The notorious figure of economic man – *Homo economicus* – shall be introduced here, as it condenses orthodox economic thought into a heuristic tool. Later on in the debate – through

the naturalistic turn – it became an ontological definition of *Homo sapiens* itself (see Chapter 4). This chapter is not about giving a full outline of the *Homo economicus*' history in economic theory, but rather to discuss the core characteristics of the formalist position and to put a special emphasis on the implicit principles governing these theories, to enable the reader to fully grasp the tremendous influence of Neoclassic economic theory on the formalist position in economic anthropology. It would be futile for the kind of argument set forth here to give justice to an in-depth historical analysis, as an historical approach is beside the point to the logical argument in the present discussion. We will therefore briefly touch upon essential aspects in the formation of *Homo economicus*, without claiming to be exhaustive. For the interested reader, Marshall Sahlins' (2008) *The Western Illusion of Human Nature* gives a comprehensive idiographic overview of the history of competitive self-interest, that goes back to concepts already present in the writings of the ancient Greeks, such as Aristotle in *Politics* (Graeber 2011: 24) and Thucydides on the civil war at Corcyra that later condensed itself into the Hobbesian *bellum omnium contra omnes* as the natural state of mankind, of *homo homini lupus* (Sahlins 2008).

“(...) Hobbes' narrative of the development from the natural to the political state in *Leviathan* is at the same time an origin myth of capitalist mentality. From the premise of each man's endless desires to secure his own good, there inevitably follows a general scarcity of means (...)” (*ibid.*: 12, emphasis in original).

In the same logic, the state is historically presented as a success story in the attempt to tame and constraint the antisocial individual, “as a result of certain fifth-century controversies regarding *physis* (nature) and *nomos* (convention)” (*ibid.*: 33). Sahlins' account of the historical development of the Western concept of human nature presents itself as an idiographic and idealist approach that attempts to elucidate the Western emic. It constitutes an example of an anti-formalist, idealist approach in the current discussion on *Homo economicus* and human nature.

How Many Deer is Worth One Beaver? – The Human Propensity to Barter

A paramount tenet in the formation of formalist economics comes in the form of Adam Smith's *An inquiry into the nature and causes of the wealth of nations* (2007 [1776]). It can be seen as “ (...) the great founding myth of the discipline of economics” (Graeber 2011: 25), namely the myth of barter as fundamental human propensity. The success story of the modern capitalist economic system, repeated over and over again in economic textbooks, goes, simplistically and satirically drawn by David Graeber, as follows:

“ ‘Once upon a time, there was barter. It was difficult. So people invented money. Then came the development of banking and credit.’ It all forms a perfectly simple, straightforward progression, a process of increasing sophistication and abstraction that has carried humanity, logically and inexorably, from the Stone Age exchange of mastodon tusks to stock markets, hedge funds, and securitized derivatives” (Graeber 2011: 28).

Smith’s famous parable lay the foundation in the development of the discipline of economics: “It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages” (Smith 2007: 16). He introduced as illustrious example “(...) that early and rude state of society, [where] (...) one beaver should naturally exchange for or be worth two deer” (Smith, cited in Pearson 2000: 934) and hence made economic theory universally applicable for any society. Smith’s infamous parable of “(...) a certain propensity in human nature (...), the propensity to truck, barter, and exchange one thing for another” (Smith 2007: 15) lay the foundation of the particular emphasis on the individual’s profit maximisation, even though Smith oriented his methodological approach towards institutions, history and society in general; he understood economy as an aspect of society, therefore analysing the national economy in terms of institutions (Polanyi 1979: 198f.). However, his argument of individual economic self-interest promoting unintentionally public interest, “(...) led by an invisible hand to promote an end which was no part of his [the individual’s] intention” (Watkins 1952: 188), resulted in a later emphasis on methodological individualism in orthodox economic theory. It was not until Davis Ricardo that the economy would become analytically detached from society, becoming autonomous and being subject to its own laws. From the 1870s onwards, the Neoclassic school of economics built its central tenets on Smith’s discussion of individual choice, the subjective theory of value. Today, Adam Smith is considered to be one of the major founding father of economics.

In the Pursuit of Happiness, it All Comes Down to Hunger and Sexuality.

Thomas Malthus, drawing from Joseph Townsend’s works, stated that the role of the economic system was not induced by the power of society, but rather by the power of nature governing hunger and sexuality, alleged natural human instincts. David Ricardo combined hunger with acquisitiveness to profit seeking as a general human motivation. Adam Smith’s vague concept of self-interest was now under Ricardo taking concrete shape. Self-interest was divided in the worker’s fear of hunger and the shareholder’s hope of profit. The market was

extended to a system of supply, demand and price that included labour and land. Society was rather embedded in the economic system as vice versa. Societal classes were determined through their role on the market. Society therefore was determined by the market laws, which in turn were determined by nature itself. Thus, Townsend, Malthus and Ricardo developed together the modern framework of a separate, autonomous economic system, governed by “economic” (i.e. utilitarian, self-interested) motivations and subjected to the “economic” principle of formal rationality. (Polanyi 1979: 199ff.)

Another, decisively influential concept stems from Jeremy Bentham’s Utilitarianism, which presents an egotistical hedonism by which any utility, or happiness, that people are striving for is eventually their own utility. “(...) Bentham is able to account for any action and/or social phenomena as the result of individual decisions aimed at maximising one’s own happiness” (Hurtado 2008: 335). His Utilitarianism led to extreme individualism, a notion which got transferred to Neoclassic economic thought. Bentham’s concept of egotistical motivation and individual profit, or, utility maximisation, that only can be restricted by the existence of external sanctions as state power, represents Neoclassic economic thought that reverberates in the formalist’s understanding of economic anthropology. It was later developed by Gary Becker into an all-encompassing concept of general utility, which we will discuss in detail in Chapter 5.

One Marginal Change in Utility, One Giant Leap for Economics.

The Neoclassic school implies a return to economy-oriented thought in a mathematical extreme form, analytically detached from other social spheres (Polanyi 1979: 194). If we understand formalistic economic anthropology as perpetuating Neoclassic economic arguments, in what sense does the Neoclassic approach differ from Classic economics in the tradition of Adam Smith and David Ricardo? The pillars of Neoclassic economics consist of methodological individualism, subjectivism and sequencing of preferences. While Classic economic theory explains only ground rent with the principle of scarcity of the respective factor, Neoclassic theory expands the principle of scarcity to a general principle that embraces all factors in an economy. Carl Menger, an economist of the Austrian school of economics, can be considered as the first economist who distinguished deliberately between the motivation for the satisfaction of material needs and the scarcity of goods (ibid.: 205). It turned out to be the combination of these concepts that constituted the foundation of Neoclassic thought. The concept of marginal utility and thereby the Neoclassic turn was developed independently at approximately the same time by Léon Walras in France, Stanley

Jevons in England and Carl Menger in Austria. (Only later they came to know that their famous invention was already predated by Herrmann Heinrich Gossen, who wrote about marginal utility already 30 years before them (Kurz 2009: 64).) Looking at the history of science, such occurrences of simultaneous theory development are not uncommon. Certain inventions take place at the same time when the circumstances foster it (Kuhn 2014: 32; Harris 2001b: 328). The Neoclassic avantgarde emphasises subjectivity in the theory of value. Differing from the Classics' objective theory of value, which explains the prices of goods through their costs in production, the Neoclassic's theory of value explains prices of goods by the consumer's individual, subjective evaluation. This subjective evaluation corresponds with the marginal utility, i.e. the evaluation of the utility of the last consumed partial quantity of a certain good A in comparison with the utility of the consumption of the last partial quantity of an alternative good B. In this way, the relative value, or price respectively, is determined on the margin in the trade-off between the consumption of two different goods. Hereby remains the question where these preferences stem from and in which way they are formed, as mainstream economics¹⁷ lacks an explanatory frame by merely interpreting preferences as "given" and thereby "black-boxing" them, i.e. leaving its implementations and workings unclear. "(...) [T]he economists' model is conceived as a heuristic device to assist in the analysis of choice situations under scarcity conditions – choice that the economist assumes is exercised in accordance with culturally determined preference scales" (Cook 1966b: 1497). The problem with "black-boxing" culture and related preferences will be scrutinised in Chapter 4.

The Rise of Economic Man

The true founding father of *Homo economicus*, however, comes in the figure of Vilfredo Pareto, who, together with Alfred Marshall, Francis Edgeworth and John Bates Clark lay the foundation of modern microeconomics (Kurz 2009: 26). Even though Pareto didn't invent the figure of *Homo economicus* itself, he nevertheless introduced the term and its definition and specification. Pareto didn't assume of *Homo economicus* as being any more than a certain abstraction of human behaviour, to be used in the context of economic models. Pareto considers the individual as the only subject of action, therefore evoking a strong methodological individualism. *Homo economicus* has to be understood as heuristic construct, while it does not automatically lead to human beings as embodiment of *Homo economicus* on

¹⁷ I.e. "the neoclassical synthesis", a term coined by Paul A. Samuelson (Blanchard 1987: 634ff.): the integration of the Keynesian macroeconomic revolution into Neoclassic theory building.

an ontological level (Kurz 2009: 35). In Pareto's understanding, *Homo economicus* is characterised by logical action, thereby meaning the consistency of an individual's actions, opting at the profit of material ophelimity. Pareto differentiates between utility and ophelimity, defining utility as objective welfare, while ophelimity being a measure for material satisfaction in the sense of subjective, individual welfare (Kurz 2009: 31f.). *Homo economicus* is always understood as maximising individual ophelimity. Economic man is aspiring utility (or rather ophelimity) maximisation under *given* restrictions. Interestingly enough, it is common sense in economics to take these restrictions as given ("black-boxing" them), leaving their analysis to the fields of anthropology and sociology. Utility in the general understanding, until Pareto, was interpersonally comparable, cardinal (numerically accountable), and could be aggregated. Economic theorists held it to be possible to measure exactly the utility a certain good was generating for an individual person. Pareto however doubted the accountability of utility and the possibility of its interpersonal comparison. Utility wasn't an observable phenomenon in a positive way. This issue led to the Paretian turn in economic theory. Pareto introduced the positive theory of rational choice, where an individual's choices were empirically observable, resulting in indifference curves. An indifference curve describes a graph with a combination of goods towards those the consumer is indifferent, thereby realising the same level of utility. For indifference curves, neither the quantity of utility was any longer of interest, nor the interpersonal comparison of utility. Pareto focused on the combination of two goods' utility and its comparison to other combinations, thereby setting forth the concept of ordinal utility, which represents an order of an individual's preferences. While cardinal utility measures the difference of utility within a combination of certain goods, ordinal utility focuses on the order of preferences, without ascribing any quantitatively expressible value to them. However, also within the economic discipline, critical voices, e.g. by Amartya Sen (1977; 1994), were raised, falsifying the alleged internal consistency ascribed to rational action by presenting cases where perfect rational action was lacking internal consistency. Inconsistencies in behaviour were often present due to norms and social obligations. "A person may refrain from seizing a unique opportunity of breaking an implicit moral code (...)" (Sen 1994: 388). However, if preference functions are not consistent, their scientific value "(...) amounts to little more than saying that people do what they do" (Boulding 1952: 36). Further critical voices within economic theory like in the Keynesian tradition Joan V. Robinson, criticise individual action as being possibly undesirable for society. Markets, according to Robinson, are unable to escape this pitfall of rationality by themselves without the state's intervention. This kind of critique on the

limitations of *Homo economicus* concerning social welfare is not uncommon within economics; however it usually remains within economic theory's framework, without questioning the underlying epistemological, methodological, ontological and theoretical principles of standard economics.

Economic Man as Stimulus-Response-Machine

When talking about the formalist economic approach, we speak of the basic postulates and propositions of orthodox microeconomics, which is, generally speaking, tantamount to the Neoclassic school in economics. The Neoclassic economic school assumes the existence of one universal economic logic underlying all decision-making at the level of the individual. The individual actor makes informed, rational choices independent of one another in an idealised, model world. "Within this idealized world, economists have been able to move with logical consistency, deductive certainty and, frequently, mathematical elegance. [However] (...) this idealized world seems to bear little relationship to any concrete empirical economic system" (Kaplan 1968: 237), except maybe the capitalist system, and even capitalist economic systems prove to be far more complex than the formal models of Neoclassic world. We will discuss these flaws of formal model building further in the forthcoming paragraphs. According to the fundamental assumption in the Neoclassic school of economy, a rational individual is assumed to choose freely between two or more goods, i.e. selecting the good which presents the maximum benefit with minimum effort. The assumption of rationality stems from the Enlightenment period, and seeks the optimal allocation of assumed scarce resources. The Classic's assumption presents "human nature"¹⁸ as being diametrically opposed to the "nature of things". While "human nature" is driven by an unceasing satisfaction of needs, the "nature of things", as counterforce is limited; natural resources are characterised by their shortage. The individual's motivation is self-interested, which constitutes the main drive in the economic system, thus selfishness is seen as necessary and beneficiary precondition for economic growth. The designation *Homo economicus* as economising actor first appears in 1889, yet , as set forth above, its beginnings go back to Classic economics of the eighteenth and early nineteenth century (Crosthwaite 2013: 95). *Homo economicus* strives to satisfy his or her needs with minimum effort and maximum utility and hereby resembles more a machine than a human being. "The economist's view of the person, as it now stands, is that the person is a pure stimulus-response machine. The

¹⁸The term "human nature" is set in quotation marks to indicate its contested understanding. It is further elaborated in Chapter 4.

preferences are given; the relative prices are given. The person is completely reactive. We might say that the person's behavior is perfectly predetermined, or predestined" (Roback Morse 1997: 182). An amusing illustration of the absurdity of mechanistic material utility maximisation is brought by Amartya Sen in *Rational Fools* (1977):

“ ‘Where is the railway station?’ he asks me. ‘There’, I say, pointing at the post office, ‘and would you please post this letter for me on the way?’ ‘Yes’, he says, determined to open the envelope and check whether it contains something valuable” (Sen 1977: 332).

This mechanistic image of *Homo sapiens* was easily refuted by critics through the introduction of empirical counterexamples, such as irrational¹⁹ and instinctive human behaviour, which did not conform to rational (consistent) cool-headed cost-benefit analysis, but inner drives or social norms, depending on the respective paradigm.

Homo Economicus’ Mutation: The “Animal Turn”

As a response to the increasing pressure from critics of the conventional model of mankind, *Homo economicus* however underwent a mutation by including irrational behaviour and intransitive preferences through what is called the “animal turn”²⁰ in economics (Crosthwaite 2013: 94): the opening of the model from Neoclassic concepts towards biologicistic explanations that view seemingly irrational behaviour as residues of natural selection which “through the back door” are rationalised again in a wider framework. As not explainable at the proximate level, irrational behaviour is lifted to the ultimate level by detecting its ultimate cause in inclusive fitness (set forth in Chapter 4), hereby subscribing to a tautology, as will be discussed in Chapter 5. This mutation from machine to animal becomes evident in the fields of Keynesianism, Behavioural Economics and Neuroeconomics, which try to map “economic activities” in the brain, only to name a few (ibid.: 94f.). These approaches naturalise culturally contingent, emic, eurocentric understandings of human behaviour. John Maynard Keynes already predated the animal turn in his tome *The General Theory of Employment, Interest and Money* from 1936, by insisting “(...) that human action is not reducible to the rational calculation of optimal outcomes, but is equally shaped by impulsions that are instinctive, bodily and precognitive (...)” (Crosthwaite 2013: 97). The animal version of *Homo economicus* presents at the first glimpse to be an empirically superior concept to the previous machine-like version.

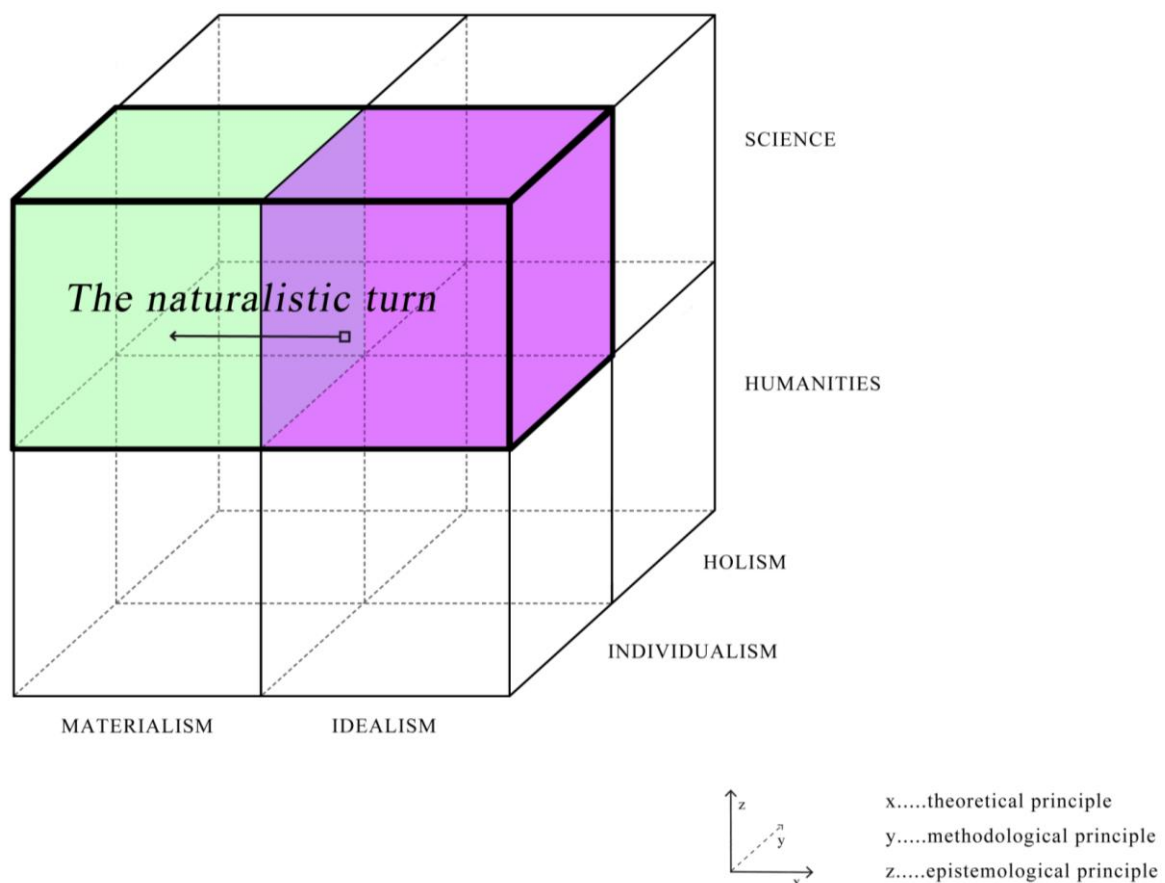
¹⁹ Irrationality is hereby defined as inconsistency in preference order, also designated as intransitivity of preferences.

²⁰ The expression “The animal turn” will be synonymously used with “The naturalistic turn”.

“(...) [W]hile neo-classicists are typically content, as Milton Friedman notoriously advocated, to posit ‘assumptions’ that are wildly inaccurate descriptive representations of reality, provided that they produce internally consistent predictive models (...), exponents of the new animal economics strive to ground their ‘assumptions’ in exhaustive observation of human and animal behaviour on macro, micro and even (in the case of Neuroeconomics) sub-cranial levels” (Crosthwaite 2013: 102f.).

Why could *Homo economicus* so easily adapt animalistic features? Let’s reconsider the theoretical embedding of the underlying principles which inform Neoclassic economics.

Graphic 3: The Naturalistic Turn



The key to the *Homo economics*’ mutation lies within the methodological underpinnings. Neoclassic economics shares its epistemological principle science and its methodological principle individualism with biologicistic paradigms such as Sociobiology. The naturalisation of *Homo economicus* can be explained through the compatibility of the principles governing the Neoclassic and biologicistic paradigms. Both paradigms take as their unit of analysis the individual. As a pivotal aspect, both paradigms presuppose the existence of human universals on the ontological level. Before the “animal turn” Neoclassic economics saw the explanatory

principle within the human “mind”, whereas through the naturalisation of *Homo economicus*, the explanatory principle became materialised via behavioural instincts rooted in the human genome. So even though *Homo economicus* experienced a shift on the theoretical level, the methodological and the epistemological principle of individualism and science respectively, already supported this mutation through their congruence with biologicistic approaches. Through this example of the animal turn it becomes clear, why philosophy of science is necessary to enlighten paradigm shifts, as solely sociology of science wouldn’t have the analytical tools to account for the question of *why* particular paradigms mutually strengthen and complement each other on certain levels.

Man is Not Like This, But Let’s Assume it for Simplicity’s Sake

In the face of criticism, a Neoclassic defence mechanism is the argument that its model of mankind only constitutes a mere abstraction and simplification in order to facilitate formal model-building. It is argued to be constructed for an idealised model world only, as set forth above, and was never meant to account for “real behaviour” (Crosthwaite 2010: 103; Pearson 2000: 973), à la “Of course we know that this is not so, that men are not like this, but we assume it for simplicity’s sake, as an hypothesis” (Bagehot, cited in Pearson 2000: 973).

“Many economists employ a social science rhetoric in describing the scope of their discipline, thus deluding others into thinking that economics is a social science with human behavior as its principal subject matter (...). But the fact remains that formal economics, as practiced by most orthodox Neoclassical economists, deals only hypothetically (i.e. deductively) with human behavior” (Cook 1969: 383).

In another paper, Scott Cook, as a representative of the formalistic camp, argues the following:

“Economists, on the whole, are willing to sacrifice reality in making (...) assumptions in order to benefit heuristically from their simplicity. Given a set of simple assumptions about human behavior, the economist is better equipped to maneuver within the realm of deductive analysis. In effect, simple postulates relating to choice of means and ends (...) enable the economist to predict economic action in accordance with the canons of logical reasoning. The strength, not the weakness, of economic theory lies in its reliance upon such simple assumptions” (Cook 1966a: 336).

Seemingly plausible at first glance, this line of reasoning however presents three difficulties. First, the problematic here lies in the eidetic character of economic models.

“(…) [T]he formalist error lies not in constructing a model of this [Homo sapiens’] nature, but in believing that the model constitutes a general theory that asserts universal validity for the axioms of liberal political economy” (Prattis 1982: 217).

Second, as we will see, the predictive power of economic theory is highly questionable, especially through the introduction of the open concept of utility, as we will analyse closer in detail below. Orthodox approaches can’t explain anything in themselves any longer through their tautological nature, let alone make predictions. Third, the *naturalisation* of *Homo economicus* resulted in the increasing confidence to present a real model of human behaviour, confirmed and tested through empirical evidence. *Homo economicus* thus evolved over the decades from a mechanic creature towards a species of animal instincts, opening up the concept of human behaviour towards the rationalisation of *any* kind of behaviour; by turning its back on perfect rationality and unfurling itself to the rationalisation of irrational behaviour via the logic of natural selection. This step elevated *Homo economicus* to the ontological level, defining it as mankind’s nature. As will be discussed in Chapter 5, opening up the concept of *Homo economicus* towards the rationalisation of *any* behaviour presents a truism in itself and effectively renders itself immune to any counterevidence, making it impossible to disprove. Every, even the seemingly most irrational behaviour is rendered rational via the application of a deeper rationality rooted in the genome. A concept that explains everything however does eventually explain nothing at all and turns out to be superfluous in terms of the scientific framework. Ockham’s razor sends its regards.

Homo Economicus Goes Native

How were anthropology and economy connected in the formalist undertaking? While “(…) cultural diversity and alternative social structures are sociological caveats on the working out of man’s original nature” (Prattis 1982: 208), formalistic economic anthropology aimed at the identification of cultural parameters of universal *Homo economicus*’ maximisation to fit their economic models.

“In the combination between economics and anthropology the formalists favoured, anthropology had a particular role. It was to provide ethnographic descriptions of different value systems and cultures so that the analyst could isolate the culturally perceived alternatives appropriate to particular decision situations” (ibid.).

Economic anthropologists that conform to the formalist principle like Cook (1966; 1969; 1970), Schneider (1970; 1974) and LeClair and Schneider (1968), follow the dominant

orthodox approach in economics. These formalist positions in economic anthropology take Neoclassic economic principles as universally valid and apply them to any given society, whereas substantivist approaches identify the economic system as integral to broader societal processes, inextricably linked to the respective society's institutional framework. Methodologically, the formalist positions reflects the principle of methodological individualism, as they take the supposedly rational and autonomous individual as unit of analysis. The social context, however, is omitted, therefore missing society's impact and determinism on the individual.

"Economic institutions are viewed either as epiphenomena of the interactions among economically rational agents, or more commonly, they are consigned to the nether world of ceteris paribus" (Kaplan 1968: 233, emphasis in original).

The formalistic economic principles see the application of "(...) an individualistic logic of utility maximization to all domains of social life" (Hann and Hart 2011: 9). It assumes a field of tension between unlimited wants and limited needs, which is regulated by a defined set of rules of choice. As set forth above, at its core, the formalistic economic position can be thus described as a problem of allocation of scarce means to alternative ends. It constitutes thus an analysis of choice. Taken as a human universal, the set of rules of choice is not limited to mere material choices, but is applied to any area of human life. "The argument made is that the utilities or cultural priorities to which economising is directed may vary but that the process of economising is held to be constant cross-culturally" (Prattis 1973b: 46). And further: "Jural norms and cultural values provide, respectively, the range of alternatives and the utilities to be attached to each alternative" (ibid: 48). In this manner, formalist approaches within economic anthropology take orthodox economic concepts and apply them in non-market societies, thus asserting to de-romanticise non-market societies by showing them to act equally according to the "economising" doctrine. The application of mainstream economics to non-market societies was paradigmatically justified through the ontological assumption of only a gradual difference between capitalist and non-capitalist systems, due to the psychic unity of mankind which implies the universality of fundamental individual thought patterns. "Subjective utility refers to the strength of an actor's preference for a specific end-state and as such can be considered as a motivational component of decision-making, as well as a rough indicator of cultural values" (ibid: 48). Well-known advocates of this approach are, among others, Robbins Burling (1962), Francesco Cancian (1972), Scott Cook (1966; 1969; 1970), Edward LeClair (1968) and Harold Schneider (1970; 1974), while Sol Tax (1953) and Scarlett

Epstein (1968) for instance authored ethnographic monographies applying the formalist principle.²¹

To name an example of a formalist position, British functionalist and Malinowski's student Raymond Firth focuses on processes of choice and decisions in non-market societies. Firth promotes the usage of formal economic terms and their application in anthropological analysis, whereas Polanyi highly criticises specifically their danger. Firth's *Primitive Polynesian Economy* (1967 [1939]) presents a classic monograph in economic anthropology that advocates the formalist principle. Portraying the Tikopian's as maximising their individual utility in the everyday choices they face, we again clearly detect the methodological principle of individualism inherent in formalist reasoning. Firth further sets forth that non-market societies do not necessarily maximise material wealth; maximising behaviour expresses itself through the accumulation of not only material wealth, but also power, prestige or complaisance towards God. We can repeatedly identify the opening of the previously narrow concept of utility in this line of reasoning.

Psychological Reductionism

Psychological reductionism, or "psychologism", seeks to explain social phenomena via psychological dispositions in the individual "mind". US-cultural relativist (or cultural psychologist) Melville Herskovits, student of Franz Boas', maintains in *Economic Anthropology* (1952) that individuals are constantly confronted with scarcity and competition, therefore having to "economise" to efficiently make use of their limited resources. He pioneered the notion of "economising" which refers to conscious individual decision under the imperative of utility maximisation; to achieve the maximum benefit with minimum effort.

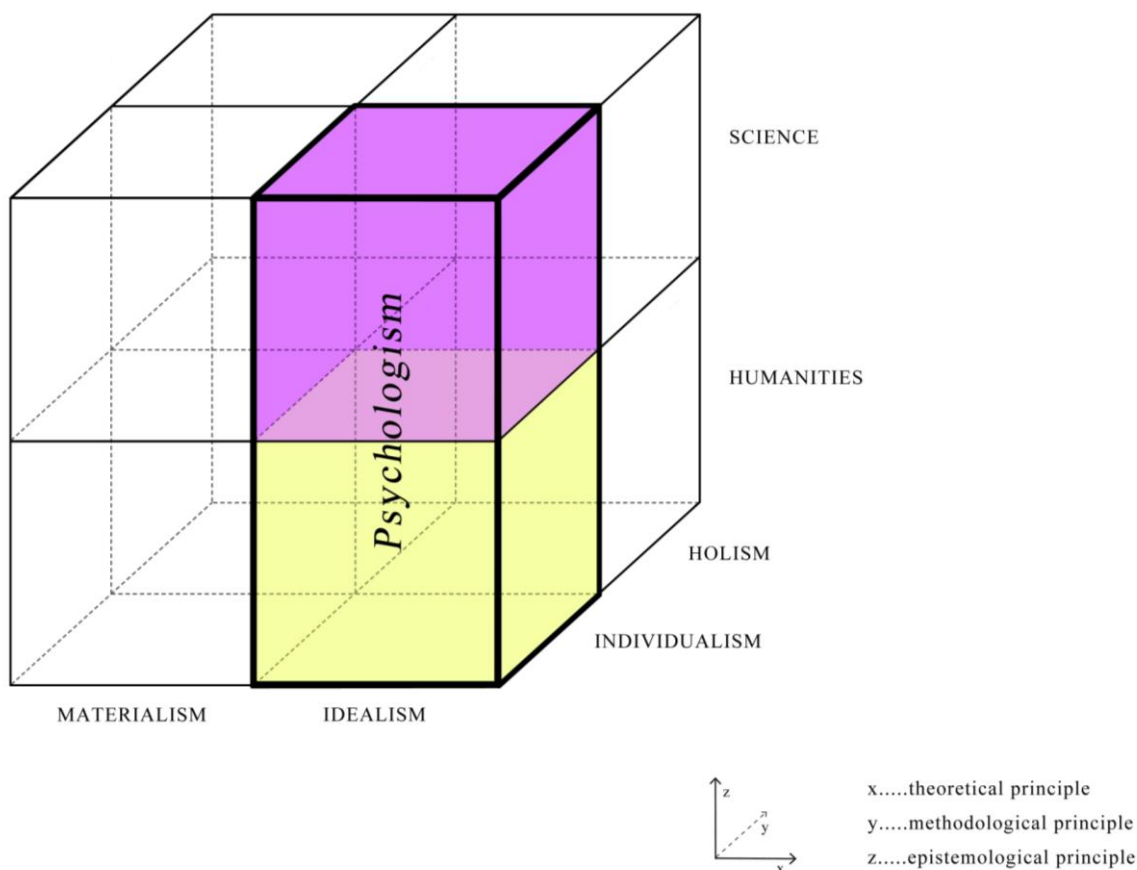
"It can also be taken as cross-culturally acceptable that, on the whole, the individual tends to maximize his satisfactions in terms of the choices he makes. Where the gap between utility and disutility is appreciable, and the producer or consumer of a good or service is free to make his choice, then, other things being equal, he will make his choice in terms of utility rather than disutility" (Herskovits 1952: 18).

All individuals maximise, but what they maximise, is culturally relative. The individual acts upon preconceived thoughts of maximising utility, which are seen as natural dispositions. Herskovits thus devotes himself to the methodological principle of individualism, while his

²¹Concerning the main representatives of the formalist side of the debate, I am indebted to Gertraud Seiser's lecture on *Theoretical Foundations of Economic Anthropology*, held at the Institute of Social and Cultural Anthropology, University of Vienna.

theoretical approach is idealism. Even though these principles conform to the Neoclassic paradigm in economics, Herskovits, reared in the Boas' school of anthropology, introduced a cultural relativist element by criticising economics for neglecting the cultural realm. The economising behaviour of individuals, is, according to Herskovits, cushioned in the respective socio-cultural surroundings. *Homo economicus* maximises universally in the guise of culture. Within the variations of the cultural milieu, people make rational decisions. Why can Herskovits, as a cultural relativist, be formalist? Isn't this a contradiction in itself? Let's think again of the principles constituting a paradigm, as presented in Chapter 1.

Graphic 4: Psychologism



Both paradigms, Neoclassic economics and Cultural Psychologism (Cultural Relativism) conform to the theoretical principle of idealism. Through this theoretical principle, both paradigms can submit to psychological reductionism, a subset of idealism which takes the human psyche as explanatory principle for social phenomena. Based on the central ontological assumption of the psychic unity of mankind, cultural relativists such as Herskovits ultimately logically reach the same conclusion as Neoclassic formalists. The psychic unity of mankind, as human universal, presupposes that humans on a fundamental level think in the

same way and are capable of the same mental processes. Inferring from this assumption, cultural relativist Herskovits argues just as Neoclassic economists do: If *Homo economicus* holds true in market economies and if all humans think essentially in the same way through the psychic unity of mankind, then it is feasible to apply rational choice theory universally to individuals in non-market economies. This form of reasoning is only possible through the shared methodological principle of individualism in combination with the theoretical principle of idealism, taking the human “mind” as unit of analysis. This congruence is central to the reason why formalist approaches can be found in several paradigms.

The Bourgeois Adult Western Male as a Blueprint for Homo Economicus

Let's revise. On the epistemological level, formalistic approaches in economic anthropology are either scientist, i.e. they surmise the existence of laws and regularities in the analysis of human societies, as well as humanist in the case of so-called “cultural relativists”²² such as Herskovits. As discussed above, “cultural relativist” approaches like Herskovits' find their relativism on the methodological level by stating that the reference system of a society poses to be relative. The paradigm represented by Herskovits actually poses a Cultural Psychologism, as on the theoretical level, the operating principle is detected in the human “mind”. Analysing thus the methodological principle that pervades formalist economic anthropology, its focus on individualism is apparent.

“The elements of scarcity and choice, which are the outstanding factors in human experience that give economic science its reason for being, rest psychologically on firm ground”
(Herskovits 1952: 3, emphasis – KR).

The individual is reduced to its psychological propensities. Fighting a rearguard action typical for a paradigm in distress, against empirical evidences that point against rational choice, *Homo economicus* as ultimate cause is being cushioned in culture. The unit of analysis in the explanation of the economic system is, according to this string of argumentation, to be detected within the individual. Ontologically, humans are defined as being by nature maximisers of utility, therefore constituting a universal in human behaviour. Ergo, as all human beings inherently embody the same psychologically rooted propensities, all human beings must behave in the same way. We consequently detect an idealist approach on the theoretical level. As all human beings economise, the easiest way to examine “economic behaviour” is to study the easiest accessible society (i.e. “our” market economy) and

²² Set in quotation marks, as the author prefers the more exact term “cultural psychologist”.

extrapolate findings stemming from that to any other society. This, ipso facto, constitutes the formalism in this line of reasoning. Accordingly, formalistic approaches struggle with ethnocentrism. They assume their findings to be universal human behaviour patterns.

“Researchers – often implicitly – assume that either there is little variation across human populations, or that these ‘standard subjects’ [Western, educated, industrialized, rich and democratic societies] are as representative of the species as any other population. (...) Many of these findings involve domains that are associated with fundamental aspects of psychology, motivation, and behavior – hence, there are no obvious a priori grounds for claiming that a particular behavioral phenomenon is universal based on sampling from a single subpopulation” (Henrich, Heine and Norenzayan 2010: 61).

Cross-cultural experiments in game theory for example, where two isolated strangers individually make decisions, far from revealing universal behaviour patterns, have shown widely different results, according to the norms and set of rules of the respective society the individuals stemmed from (ibid.: 65f.). This data can already hint at emic preferences prevailing in a particular socio-cultural system. Due to its individualistic approach, it doesn't however explain *why* these superstructural elements are prevalent. For this purpose, a holistic-materialist etic analysis is indispensable, as will be set forth in Chapter 5.

“The idea that we are involuntary servants of our animal disposition is an illusion – also originating in the [Western] culture” (Sahlins 2008: 2). The proponents of genetic determinism and the innate disposition of self-interest is rooted in the classic bourgeois subjects (ibid.).

“What we are pleased to consider human nature mostly consists of the inclination of (bourgeois) adult males (...) and to the comparative neglect of the one universal principle of human sociality, kinship” (ibid.: 44).

Through their ethnocentric emic perspective, Western practices are taken as proof for universal human behaviour patterns, while they actually “(...) detach the principle of individual maximisation from its bourgeois context and spread it around the world” (Sahlins 1972: 127). The underlying logic behind this formalistic imperative is that Western emic is a superstructural product of the capitalist system, therefore being coherent in the thought systems of Western scholars. Perpetuating Western emic views and categories is hence a superstructural function of the society's capitalist structure.

2.3. *Substantivist Explanatory Approaches*

Robinson Crusoe Discovers Society – Substantivist Voices Within Economics

So what do opponents of the individualistic strand of argumentation set forth to weaken the prevalent Neoclassic formalistic paradigm? A substantivist approach towards economics comes with the paradigm of Historical Materialism in the person of Karl Marx. In Marx' legacy, we detect a return towards a society-focused approach. Marx differs from standard economics in many ways; on the methodological level, his analytic economic works (in contrast to the ideological part of his works) represent an example for methodological holism. As in Emile Durkheim's works, as well as later the substantivist works in economic anthropology, the economic system is embedded within the wider range of society. Marx' ontology sees man as a socially constituted being. While human beings are part of nature, they are at the same time social beings. Individual members being connected with each other through social relationships, *Homo sapiens* emerged from natural processes, and constitutes by its very nature a social species (Wolf 2010: 73ff.). On the level of the theoretical principle, Marx' analytic economic writings (again, in contrast to his political ideology) reverberate a strong materialist position. He clearly states that the basis, i.e. the economic, material circumstances in a certain society determines the superstructure such as the political, religious, philosophical, legal and artistic realms of mankind (Marx 1872: 696). With this approach, Marx gives an alternative explanation of change in societies, in contrast to his Neoclassic counterparts who diametrically opposed support the idealist position. Concerning his theory of value, Marx remains within the framework of Classic thinkers as Adam Smith and David Ricardo, as his theory on added value building on the objective theory of value, which later was, as we have seen, to be revolutionised by the Neoclassic' subjective approach. The subjection of the economic organisation under societal goals exists for Marx only in the system of so-called "primitive communism" as well as in his utopian future communist system, whereas Karl Polanyi sees the integration of the economic system in society as a determining characteristic in all societies, except from modern market systems (Humphrey, in Polanyi 1979: 47). Neo-Marxist approaches emphasise the relevance of the mode of reproduction (instead of exchange and distribution discussed in the formalist-substantivist debate) and root their contributions in historical settings. On the methodological level, their contributions present a holistic approach towards the analysis of societies. Anthropologists like Claude Meillassoux (1981), Maurice Godelier (2012) or Emmanuel Terray (1972) in the French tradition and Eric Wolf (2010) and Sidney Mintz (1986) in the US embed the mode of

production in the wider social relations and especially emphasise power relations in the mode of production and reproduction. Through their methodological holism, these approaches present a substantivist contribution in economic anthropology, which constitute a shift away from the isolated Robinson Crusoe figure, the infamous representative of methodological individualism, towards the embedding of Robinson Crusoe within society in a holistic framework. After having discussed the foundations of formalist economic thought as well as substantivist voices within the framework of economics, let's turn to Karl Polanyi's opus magnum *The Great Transformation* (1944) that laid the grounds of the formalist-substantivist controversy.

The Great Transformation

The Great Transformation (Polanyi 1944), as the trigger of the formalist-substantivist debate, gave the decisive impetus in the bifurcation of the field of economic anthropology. "It is primarily a historical account of the development of the 'free market' in nineteenth-century Britain and of that society's reaction to the unprecedented market domination of economic life" (Hann and Hart 2011: 55). Polanyi states that the market system is not the "main form of integration" in all societies throughout history (ibid.: 57), and elaborates that principles of reciprocity and redistribution dominate non-market societies. Richard Thurnwald already saw the economic system as part of the wider societal framework and introduced the concepts of reciprocity and redistribution, which were taken up by Polanyi. In this way, Polanyi argues for the substantial approach to analyse economic systems. His substantivist viewpoint focuses on institutions and the functional analysis of patterns of economic behaviour. Process and institutions together form the economy. Polanyi rejects the notion of human beings having a natural propensity to truck and barter, rather he introduces three methodologically holistic modes of integration, only one of them being of market character. Polanyi acknowledges the value of the formalistic conception of the economy as a place of entities that distribute, save, market surpluses and form prices, a phenomenon that occurred under the circumstances of the 18th century and is useful within the institutional frame of a market system, as the actual conditions correspond more or less these postulates (Polanyi 1979: 187). However, this framework of a market system has to be seen as peculiar as it is, in its historical and cultural context and not as a universal, as is claimed by the formalistic position in economics and economic anthropology, which understands any human economic action as a potential system of supply, demand and prices. Far from being universal, Polanyi describes the market system as we know it as a unique innovation (ibid.: 129). In market economies, the social structure is

subject to the logic of the market system and life is organised around it. The market system is dominant and determines any other sphere of life. However, it would be a fundamental error to assume this system to be generally valid for all societies at any point in history. Arising for the first time in England in the course of the Industrial Revolution, the market system hence transformed the social structure. The decisive momentum was the conversion of labour and land into commodities, leading to believe they were „produced“ for the market. This fiction of commodities, to paraphrase Polanyi, entrusted the fate of human beings and nature to the laws of the market. As a consequence, the market system created a new form of society, as the economic system was handed over to a supposedly automatic apparatus, the market. This institutional mechanism governed humans in their daily lives as well as their natural resources. The economic realm was disintegrated from society and turned into a self-governing entity, a process which Polanyi calls disembedding. (Polanyi 1979: 129ff.) Polanyi further lays out, that the alleged “economic motivation” of all human action is based on a misconception. No human drive, he argues, is *per se* „economic“. There is no such a thing as an “economic” experience *sui generis*. Human beings are not to be seen as “economic men”, but rather as social beings. Motivations don’t stem from economic reasons, but from family-related, political, religious order. The pursuit of material goods does not happen for individual self-interest, but rather for social status, influence, appreciation and power. Material property therefore is to be understood as a means to an end. Non-market economies are characterised through the lack of the profit motive as well as the maximisation of utility by the individual. There is no wage labour and no specific institutions that dedicate themselves exclusively to the economic system. Polanyi draws on ethnographic material by Richard Thurnwald and Bronislaw Malinowski’s accounts of the Trobriander’s kula to accentuate the lack of individual pursuit of profit in various indigenous societies. If “economic” motivation were to be seen as natural, human instinct, then all ancient societies would have to be seen as “unnatural”.

Having briefly addressed the formalistic solution in above discussing “the animal turn”, the incorporation of seemingly irrational behaviour into the formalistic matrix will be further elaborated in Chapter 4. As a general rule, according to Polanyi, the human economy is usually embedded in its social circumstances. Hereby, he refers to the economic organisation of a society as a part of the social structure as set forth in the introduction of this chapter. The transformation towards a system where society is, contrarily, embedded in the economic system, is a whole new phenomenon. Here, Polanyi bears on the subordination of further societal fields under the dominance of the economic organisation. (ibid.: 133ff.)

Empty boxes. A substantivist attack on weird²³ people

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institutional setting. And without this institutional content, the principles are nothing but 'empty boxes', from which we can obtain only empty generalities. This is not to say that standard theory operates with 'empty boxes'. On the contrary, as we have seen, those boxes are filled with an institutional content distilled from the cultural patterns of a capitalist society" (Georgescu-Roegen 1966: 109f., emphasis in original)

Economic anthropology that follows the substantive approach does not automatically fundamentally reject the formalistic position itself. However, substantivist accounts ascribe it a limited explanatory power that is only applicable to market economies and sees a blatant ethnocentrism within the formalistic tenets, as they solely reproduce Western emics. While formalist proponents represent a gradualist approach towards different types of economics systems, substantivist advocates stress that the difference is not one of degree, but in kind. Further, the following distinction is made on the methodological level:

"Polanyi is not concerned with 'innate' economic propensities, or for that matter with the behavior of individuals qua individuals at all. What does concern him is institutionalized behavior. He states explicitly that man, when considered in the aggregate, is much the same at all times and places, i.e., primitive peoples are not any more or less 'innately' altruistic or self-seeking than persons in market-organized economies (...). However, patterns of economic motivation differ from society to society, and these reflect not the social interaction of rational, autonomous individuals but different institutional orders. In short, there is a fundamental methodological as well as theoretical difference between the substantivists and the adherents of the basic tenets of formal economics (...) – a difference in terms of whether the greater causal weight is to be placed on individual actors or on institution" (Kaplan 1968: 234):

The economic system (at least in non-market societies) is embedded in the totality of all institutions of a society. Methodologically, it cannot be reduced to the motivations of individuals, as mere aggregates of individuals do not account for the diversity in economic systems and structures (Gudeman 1996: 173; Kaplan 1968: 234). Specific aspects of a society, like the economic system, are not analysed in isolation and separately from the wider framework. Nor are they taken out of context and compared with the same isolated aspect of other societies. Rather, these aspects are to be studied within their specific circumstances and context. Hence, the economic system constitutes an integral part of the social and cultural fabric of a community and fulfils certain functions that are only to be seen in context and related to the broader framework of the respective society. Where the cause and effect-relation however stems from, is ambiguously treated in substantivist economic accounts, depending on

the respective theoretical principle. Even if the economic system cannot be isolated from its broader context, materialist substantive approaches see the social structure and context of a society itself probabilistically determined by its environmental conditions and its mode of production and reproduction, while idealist substantive approaches seek the decisive factor in the society's superstructure.

Bronislaw Malinowski, for example, in his famous analysis of the kula-ring, rejects the notion of a separate economic system and classifies economic activities explicitly as a social phenomenon, focussing however on the social function for the individual (Malinowski 1978). (At the same time, Malinowski "rationalises" the Trobriander's behaviour and opens up the concept of rationality towards a wider social sphere, rejecting the Neoclassic assumption of self-interest as irrelevant for the Trobriander's social realities.) A frequent aspect of substantivist approaches is the rejection of material utilitarianism. Already set forth by Durkheim and taken up by a series of substantivist ethnographers is the concept of social solidarity, whereby the society determines economic organisational processes. Not inherent self-interest, but social norms regulate the economic cooperation between people. Marshall Sahlins (1972) characterises exchange in non-market societies as a continuous social relationship and hence not to be analysed isolated from the broader context. The way people think is not due to psychological dispositions, but is an effect of the socio-cultural circumstances, not their cause. To understand the economic system of a society, we therefore have to understand the society itself, as the economy is embedded in social structures and not separately analysable. Economic systems are not gradually different from each other, but qualitatively through the respective social mechanisms that govern a society.

The argument against the maximisation of inherent self-interest has however been easily dismissed by the proponents of the open concept of utility in the formalistic camp, like Gary Becker or Raymond Firth, by arguing that substantivists were oblivious towards the fact that people would maximise also non-material utility.

In Search of Non-Market Barter Societies

So let's revisit Adam Smith's treatise on the human propensity to barter for a moment. His famous stories of how the monetary system developed out of the inefficiency of barter emphasise the tedious difficulties of finding the right trading partners without the use of money.

“One man, we shall suppose, has more of a certain commodity than he himself has occasion for, while another has less. The former consequently would be glad to dispose of, and the latter to purchase, a part of this superfluity. But if this latter should chance to have nothing that the former stands in need of, no exchange can be made between them” (Smith 1776, cited in Graeber 2011:26).

Smith’s imaginary barter societies that invoke fictional North American native groups, do not comply with the ethnographic record. No society based on barter was ever described in the ethnographic literature, except in cases, where Western economies collapsed, such as Russia in the ‘90s and Argentina around 2002, or as well trade within prisons in capitalist systems (Graeber 2011: 37). But these societies were already socialised in market economies. However, in non-market societies that lack the use of money, no barter system was registered by anthropologists. In her paper on barter, Caroline Humphrey frames it as following: “No example of a barter economy, pure and simple, has ever been described, let alone the emergence from it of money; all available ethnography suggests that there never has been such a thing” (Humphrey 1985, cited in Graeber 2011: 29). Adam Smith might not have had access to reliable information on non-market societies, but from the middle of the 19th century on, Lewis Henry Morgan’s works on the Iroquois made quite clear, that goods were stored and allocated by women’s councils (Graeber 2011: 29). No barter at sight. This ethnographic evidence was overlooked or simply ignored by formalistic economics that maintains its origin myth of the imaginary land of barter until today. If barter occurred in the ethnographic literature, then between strangers or even enemies such as for instance the Nambikwara of Brazil where festivities on the occasion of trade with hostile groups could lead to warfare, if one side felt to have been taken advantage of (ibid.: 29f.). Economic activities within a group are however embedded in social ties and not deemed as a separate sphere of activity, it is not a mere matter of exchange between unrelated, even anonymous individuals as suggested in economic literature. “The economic organization of primitive society is virtually identical with its kinship organization” (White 1959a: 247). In the analysis of a socio-economic system, thus, the embedding of its actors is essential to explain the economic context.

“The first thing that should be clear by now is that we’d really have to know a bit more about Joshua and Henry [two fictional individuals trading in an economic textbook]. Who are they? Are they related? If so, how? They appear to live in a small community. Any two people who have been living their lives in the same small community will have some sort of complicated history with each other” (Graeber 2011: 34).

In face-to-face economic systems, transactions are thus embedded in a social relationship between two or more persons and it is this relationship that defines the way objects are passed along.

The Gift. An Example of the False Dichotomy of Self-Interest and Altruism

Gift giving has been made famous by Marcel Mauss' *The Gift* in 1924. How can the analysis of gift exchange contribute to a deepened understanding of the formalist-substantivist controversy? Gift giving has traditionally been linked with the sentiments of generosity and altruism, which stood in contrast to self-interested *Homo economicus*. Has the phenomenon gift giving thus finally disproved rational, self-interested, egotistical economic man? The answer is, yet again, no, it hasn't. Despite great efforts of substantivist attacks, *Homo economicus* is still alive and well. Again, the auxiliary hypothesis of non-material utility comes as saviour to the research program set forth by Neoclassic economics. As we already know from Kuhn as being typical by its very nature, the paradigm proves to be resilient to apparent anomalies (Kuhn 2014: 90ff.). But let's take a look at the main arguments surrounding the phenomenon. Often misunderstood as contrasting commodities and gifts in the sense of "the West and the rest", "(...) [i]n fact, Mauss's aim was to dissolve the opposition between pure gifts and selfish contracts in order to reveal universal principles of mutual obligation and social integration" (Hann and Hart 2011: 14). Mauss rejects Adam Smith's notion of individual barter being "natural" human behaviour, whereas at the same time he shows that gift giving in so-called "primitive" societies is not altruistic at all, but rather a form of mutual obligation. Mauss contrasts material utilitarianism with ethnographic examples such as the potlatch of the American Northwest and the Melanesian kula, which he terms as "(...) very far from being materialistic. (...) It is indeed something other than utility that circulates in societies of all kinds (...)" (Mauss 1990: 72). A typical reply from an orthodox economist towards Mauss distinction of material utility and subjective utility would be such, that the maximisation of social status is itself also utility maximisation, as economic theory doesn't necessarily imply the maximisation of material goods, but rather of any utility in general. This open concept of utility presents itself a tautology (see Chapter 1 and 5); however, this doesn't keep formal economics from rejecting substantivist economic anthropological works as misunderstanding economic theory. Mauss even takes a step further and opens up the concept of utility himself. He criticises Malinowski in classifying transactions according to their motives of either self-interest or disinterestedness. Mauss states that in reality, no gift is ever given disinterestedly, thereby arguing just the same way as formalistic economic anthropology

and orthodox economics do to defend *Homo economicus*. “Like the market, (...) [gift exchange systems supply] each individual with personal incentives for collaborating in the pattern of exchanges. (...) Mauss’s fertile idea was to present the gift cycle as a theoretical counterpart to the invisible hand” (Mary Douglas, in Mauss 1990: xiv). We readily detect a typical formalistic line of reasoning here, through the transfer of the market concept from the context of Western societies to the very distinct context of non-market societies, paired with the open concept of utility which presents itself to be a strategy to counter empirical anomalies.

A substantivist explanation of gift exchange systems would focus on the socio-economic system as a whole. Interestingly and quite contradictory to his arguments we find in the centre of Mauss’ observations, economic action is not motivated by individual self-interest alone, but has to be understood as basis and consequence of societal processes as a whole. As a *total social fact*, the system of gift giving in the sense includes the whole society with all its institutions. Emic concepts of gift giving have to be interpreted according to their cultural contexts, acknowledging the polysemic character of concepts and their distinctive cultural use. Mauss introduces *total social facts* as precise description of the interconnectedness of social fields such as religion, politics and economics, through which the complex meanings of a concept only starts to unravel. Just as the gift is to be interpreted as religious, economic and social phenomenon, also any other general concept of the social sphere has to be explained in terms of a connection between domains in its respective configuration and not to be reduced to singular domains (Mauss and Hahn 2015: 22ff.). Human action is embedded in societies as a whole and not to be divided up in different spheres.

2.4. *A Paradigmatic Evasive Strategy*

Empirical Inconveniences and the Formalist Economics’ Counterstrike

As long as economics stay in the realm of in an idealised-hypothetical model world, its mathematical approach is successful in formal model building. Yet, in contrast to the discipline of mathematics, “(...) economics ought to be an empirical science” (Puu 1967:106). “Economics, fatefully, took (...) [the] path [of] explicitly modelling itself on nineteenth-century physics to a remarkable level of detail” (Ferguson 2000: 993). Before the debate, while Neoclassic economics was triumphing through its mathematical, analytic underpinning that made it rise up to a seemingly “hard science”, voices were raised to integrate

anthropological empirical findings into the science of economics. So claimed Raymond Firth, in succession of Malinowski's LSE chair, the following:

"A close study of the data provided in accounts of the life of primitive peoples would lead to the incorporation of interesting comparative material, a correction of perspective, and, it may even be, some revision of the general fundamental premises of the older science [i.e. economics]" (Firth, cited in Pearson 2000: 937).

Or Richard Thurnwald maintaining in *Economics in Primitive Societies* (1932) that "(...) we must not attempt to master the economic spirit with the aid of terms taken from our modern life and way of thinking" (Thurnwald, cited in Pearson 2000: 937), but rather turn to a comparative study of economic systems in order to test the hypotheses postulated by Neoclassic economics. In the emerging undertaking to compare "*Homo economicus* against *Homo sapiens*" (Pearson 2000: 938, emphasis in original), an overwhelming record of empirical inconveniences towards economic assumptions rose doubt concerning the alleged universal pillars of economics. *Homo economicus*, being pushed from its high universalist horse, was discredited as an ethnocentric emic Western projection. However, after a series of debates surrounding the self-conception of economics as a discipline, and via an additional assumption concerning the maximisation of utility, *Homo economicus* was back to haunt the self-image of mankind. The dominant ossifying position "(...) which by 1945 had gained ascendancy in the economics profession, was that, mutatis mutandis, the naked tribesman was every bit as much a *Homo economicus* as the waistcoated banker" (Pearson 2000: 938). We will show in the following paragraph, what arguments were risen against *Homo economicus*' all-encompassing reign and set forth the reason why the additional assumption in economics' foundations paved the way to formalist economics' overwhelming predominance in the field, that used to be contested by non-formalistic approaches in anthropology and other disciplines as well.

"Reports 'from the field' ran thick with instances of economic malpractice in primitive society, which taken together could easily fill a bill of indictment of the universal Homo economicus" (ibid., emphasis in original).

This indictment was usually concerning reciprocal gift-giving instead of trading activities and/or the lack of markets and bargaining, no property rights, as well as the lack of accumulation of wealth (ibid.: 939). Most outstanding proved to be the blatant ritual destruction of wealth (see Chapter 3 on *Potlatch*), which openly contradicted the logic of

material wealth accumulation. Also, the reliance on magic was seen to hinder economic efficiency, certain animals or plants were taboo or certain omen on certain occasions forbade the continuation of work for a particular period of time (Pearson 2000: 941ff.). Social life, customs, obligations and intricate ritual traditions were seen as cumbersome obstacles to achieve economic efficiency in non-market societies.

“(…) [T]he effect of studying primitive economies was clearly corrosive of such Ricardian pretensions. Was there any way that this riotous profusion of human biases, impulses and affinities could be reconciled to some metanarrative, grad theory, or covering law?” (ibid.: 959)

How could Neoclassic economic science be saved given the fact that ethnographic evidence proved its central universal pillars to be mistaken? How could these stubborn empirical anomalies be pruned to fit the Neoclassic framework? Formalist economics soon started its counterattack. Anti-formalist economic anthropologists simply did not understand the principles of economics, was the common accusation. As a reaction, reciprocal behaviour was soon to be framed as compatible with self-interest and, or that matter, more naturalistically speaking, with aggressiveness. “(…) ‘[L]aying on obligations of reciprocity’ (Sahlins 1962: 1068) in a reciprocal economy is functionally equivalent to the selfish seeking of gain or profit in a market economy” (Cook 1966a: 329). Hence, seemingly contradictory evidence to the principles of economics was soon enough “rationalised” by explaining apparent inconsistencies with formalist economics by attributing a certain function to the respective contradictory custom or behaviour. In a paradigm’s classic evasive manoeuvre in times of empirical inconveniences, the proximate cause got shifted towards the ultimate cause. Already predated in the “animal turn”, “irrational” behaviour was thus seen as naturally selected through trial and error and constituting a logical function in the respective non-market society. Because of the compatibility of the epistemological and foremost the methodological principle which sees as unit of analysis the individual, this explanatory approach was later “naturalised” by Sociobiology by linking “irrational” behaviour to underlying genetically transmitted, functional instincts. The methodological and epistemological compatibility led to a harmonious collaboration between Neoclassic economy and Sociobiology, as elaborated in Chapter 4. As discussed above, reciprocal gift-giving was soon understood as concurring to a wider and ultimately utilitarian logic, as ostensibly reciprocal behaviour became to be reduced to self-interested social “insurance” through strengthening social ties (Mauss 1990), proving the altruism-egoism dichotomy to be a false dilemma, as set forth above in the example of gift giving (Pearson 2000: 969). Social status was achieved through conforming to social

obligations of gift-giving and other seemingly “altruistic” behaviour. The destruction of material wealth during potlatches, as set forth in Chapter 3, was re-interpreted as following ultimately a rational social motive that outweighed the utility of material goods (Pearson 2000: 957). Any means to achieve higher social status were thus considered rational in a sense that they maximised utility, as for example institutional economist and sociologist Thorstein Veblen notes in *The Theory of the Leisure Class*:

“Conspicuous consumption of valuable goods is a means of reputability to the gentleman of leisure” (Veblen 2007: 53).

The Reign of Economic Imperialism

In accordance to the capitalist economic system prevailing, the formalistic approach came to constitute an emic justification of the very same system on the superstructural level. The formalistic explanatory approach hence presents to be a logical superstructural effect stemming from the underlying capitalist system. Any type of behaviour that maximised any kind of utility was viewed as being rational “(...) and even conscious adaption to specific environmental, technical, and social conditions” (Pearson 2000: 968). Hunting taboos preserved otherwise endangered game; a modest lifestyle reflected a logistical adaption to a society’s mode of subsistence (ibid.). Any kind of behaviour was rendered in a way to conform to perfect rationality (ibid.: 974).

“The cross-cultural applicability of this analytic framework was thought to be possible because in relating wants to resources through economizing and maximizing assumptions, the axioms used by an economist to account for behavior are sufficiently abstract to be applicable to any human society. The theory of maximization says nothing about what is to be maximized” (Prattis 1982: 207, emphasis in original).

Hence, apparently contradictory ethnographic evidence was framed in an ascribed rational logic that was just on the surface level different from “Western mentalities”. In effect, incompatible and paradoxical behaviour was reconciled with formalist economics through opening up the concept of utility. Previously defined as being of purely material character, the concept was expanded through the courtesy of an auxiliary hypothesis, namely the assumption of *any* utility, material or non-material, which satisfied an individual’s needs or turned out as positively influential to the individual’s wellbeing. Most famously, the open concept of utility was introduced by economist Gary S. Becker of the University of Chicago (Becker 1976, 1993; Becker and Murphy 2000) and made it into standard economic textbooks such as

Mankiw's *Principles of economics* (2004). The introduction of general utilitarianism led to an opening of the limits and scope of the economic discipline. Having been previously restricted to the study of explaining phenomena of production, distribution and consumption (in Western economies identified with the study of the market) it was now possible to apply the economic toolkit to any aspect of human life. "Economics is no longer defined by a particular field but by a particular method [for a general analysis of human behaviour] – a method that, some economists claim, allows them and other social scientists, if they adopt it, to deal with mostly any social phenomenon" (Hurtado 2008: 336). This expansion of economics towards any type of behaviour has been termed by critics as "economic imperialism" (ibid.).

"[T]he economic approach provides a valuable framework for understanding all human behaviour [because] all human behavior can be viewed as involving participants who maximize their utility from a stable set of preferences (...)" (Becker 1976: 14, cited in Hurtado 2008: 339).

Social phenomena are thus explained via the choices individuals make according to their set of preferences which is influenced by their interactions with the social environment. Being influenced however doesn't mean determined in this approach: "[W]e [economists] do not model behavior as being determined by forces beyond the control of the individual" (Lazear 200: 100, cited in Hurtado 2008: 340). The underlying theoretical principle reverberates a strong idealism. "The flexibility of the approach is thus evident. Individuals can produce any commodity from which they derive pleasure, and this goes back beyond market activity" (Hurtado 2008: 341). The theoretical implications of the open concept of utility and its consequences will further be elaborated in the concluding Chapter 5. In the meantime, until further inspection, through this miraculous rescue mission of the open concept of utility, formalist economics is apparently saved – for now.

Concluding Remarks on the Controversy

In this chapter, we have set forth what the formalist-substantivist debate was about, namely the question of whether formalist economic concepts can be applied in the explanation of non-market societies. This case study further elaborated the general paradigmatic fault lines, thereby illustrating the importance of an analysis informed by philosophy of science. Why is the understanding of the underlying set of principles and their interrelations of importance? Because they can be informative about what kind of set of principles proves itself suitable to account for social phenomena. From the rise of economic imperialism we have seen the typical behaviour of a paradigm in adversity. The mechanism of rearguard action is a classical

move of adepts of a certain paradigm in lack of persuasive arguments. With this example of the formalist-substantivist controversy in economic anthropology, fundamental principles in philosophy of science were elucidated. Paradigms are inertial scientific worldviews and research programmes. Empirical anomalies that are not yet covered by the paradigm's theory building do not challenge the paradigm itself, but rather result in ad-hoc modifications of the theory stem by adding an additional auxiliary hypothesis to eliminate incipient conflict (Kuhn 2014: 65f., 90ff.), which has happened in the formalistic camp by introducing general utilitarianism as well as naturalising *Homo economicus*. Formalist economics emerged strengthened from the substantivist attacks by fortifying their theoretical groundwork.

So why has the “formalist-substantivist” debate remained largely unresolved into two incommensurable sides? We could show that the fault lines proceed among different paradigmatic lines, concerning (1) the methodological principle, (2) the theoretical level, (3) the underlying ontology and (4) the epistemological principle.

(1) First and foremost, the controversy ranked around the methodological question of the adequate unit of analysis. “Because the formalists focused upon choice, which is always individual, their approach necessarily entailed methodological individualism. The substantivists, on the other hand, focused upon the institutional matrix in which choice occurs” (Isaac 2005: 19). In summary, substantivist approaches expressed their criticism mainly concerning two aspects of the formalistic position. On the one hand, the methodological principle of individualism was rejected as being unsuitable to account for social phenomena, instead they opted for methodological holism that accounts for the broader societal structures, institutions and processes. The second main point of criticism of substantivists concerns the ontological level.

(2) Concerning the theoretical level, we could detect different positions within the formalist, as well as the substantivist side of the debate. Whereas the formalistic faction was located as subscribing to the theoretical principle of idealism, the substantivist camp was subdivided into theoretical idealists as well as materialists. As set forth beforehand, thus, neither “formalism”, nor “substantivism” present a paradigm in themselves, but merely refer to as subcategory of the methodological principle in the debate. As previously outlined above, the substantivist principle can be combined with different principles on the epistemological and theoretical level. A crucial connection between the methodological and the theoretical level was elaborated in the analysis above, namely the congruence of methodological individualism and theoretical idealism which led to a collaboration of psychologistic

approaches in Neoclassic economics as well as Cultural Relativism. Psychologism in the theoretical principle of idealism correlates with methodological individualism and presents the main rationale why the aforementioned paradigms are compatible with each other.²⁴ This alliance is decisive to understand the interrelation of paradigms on the formalist side of the debate. On the substantive side of the controversy, in the theoretical strand of materialism, psychological dispositions were explained as effect of socio-cultural circumstances and not as their cause, thus reversing the logic of psychologistic approaches.

(3) On the ontological level, biologicistic approaches and Neoclassic economics further made common cause through the mutual assumption of human universals. This aspect leads us to understand why Sociobiology, as knight in shining armour, came to the defence of *Homo economicus* by materialising the human “mind” through its attempted rooting in the brain, or, as well as the ultimate rationale in the human genome. Furthermore, the common assumption of human universals also extends to the paradigm of Cultural Psychologism (Cultural Relativism), with its psychic unity of mankind; a fact that additionally to the congruence on the theoretical and methodological level reinforces the psychologistic collaboration with formalist economics on the ontological level. On the substantivist side of the debate, the ontological level with utility maximising man was fundamentally scrutinised and repudiated due to either contradictory ethnographic material, or the general difficulties of the concept of subjective, non-material utility. The formalistic key concept of maximisation was dismissed as irrelevant to comparative economics that truly accounts for cross-cultural differences and similarities (Isaac 2005: 19). Positing the same universal motivations in all individuals leaves “(...) the patent cross-cultural differences in economic institutions unexplained” (ibid.). The typical formalistic response towards substantivist criticism focuses on the alleged lack of knowledge and ignorance of substantivists concerning the principles of economics and economic theory. The substantivist position allegedly misunderstood the maximising imperative. The formalistic approach would be applicable to any type of society, as all human beings do act upon infinite needs that are restricted by limited resources. Neither material goods, nor capitalist markets are necessary prerequisites to maximise utility. On the contrary, any kind of utility (like social status and reputation) could be maximised. Thus, the formalistic response to substantivist arguments introduced the auxiliary hypothesis of the open concept of utility, which was commented by Maurice Godelier stating that if any purposive act is rendered somehow being “economic”, de facto no behaviour eventually can

²⁴See graphic *Psychologism*.

be defined in terms of “economic” behaviour (Godelier 2012). We will come back to this point in Chapter 5.

(4) On the epistemological level, the formalist side was either supported by scientists (especially economists who strived for the formulation of scientific laws), as well as humanists such as Herskovits (see above). Why humanists as well as scientists could work together on that topic was due to their congruence on the methodological, theoretical and ontological level as set forth in point (2) and (3). The substantivist side during the peak of the debate was largely humanist, however was later further divided into scientists, humanists as well as postmodernists. A strong voice in social and cultural anthropology today fashions an idiographic approach toward the questions of economic anthropology. Nomothetic generalisations are rejected, especially because of the fear of falling into the formalistic trap of comparing apples and oranges. Therefore, idiographic approaches commit themselves to cultural relativism, descriptive ethnographic accounts and analysing the specific historical and social contexts. This approach has insofar gained increasing popularity through the rise of postmodernism at the epistemological level in anthropology.

“The substantive argument was rightly concerned with perspectives on adaption and embeddedness that the formalists could not ignore, but their strategy of polemic was wrong. Instead of arguing for an analysis discrete to primitive and peasant economic systems, their corrective to formalism should have been an argument that applied equally to the social processes of a market economy, thereby providing a theoretical base to discuss all economic and social formations” (Prattis 1982: 210).

We have shown in the previous discussion that substantivist approaches often focussed largely upon the distinction between material and non-material utility, a point which was easily discarded through the introduction of the open concept of utility. In my understanding, this distinction is beside the point and led the substantivist economic anthropologists easily astray. Substantivist accounts of the ‘60s and ‘70s admittedly demonstrate a number of logical inconsistencies and vulnerabilities. As the substantivist side of the debate increasingly focussed on non-market societies instead of aspiring to aim at a general theory of comparative economics, it soon faded in importance. “Polanyi would have been deeply shocked that his leading acolyte [George Dalton] took that position [to apply the substantivist approach only on non-market societies], because Polanyi’s motivation for studying ancient and non-Western economies was to construct a truly universal framework for comparative economics” (Isaac 2005: 20). The substantivist position was soon predominated by idealists and relativists. “While it is true that they were interested in ‘honoring’ cultural differences, they seemed to

have an even greater interest in dishonouring the attempt to achieve a science of society” (Harris 2001a: 235).

At the same time, as outlined above, the formalistic side enjoyed backing by Sociobiology and Evolutionary Psychology because of its congruence on the methodological level as well as the ontological level with the assumption of human universals. The failure “(...) to develop a truly cross-cultural comparative economics (...) contributed to substantivism’s demise in economic anthropology” (ibid.: 21). Apparently, the formalistic camp can be said of having largely “won” the controversy speaking from a “sociology of science-perspective”, which sees itself perpetuated in the public perception. From a “philosophy of science-perspective” according to logical rules however, we are just starting to elucidate our argument, to be elaborated in Chapter 4 and 5. For now, the formalistic economic approach dominated the field, especially since later increasingly idealist substantivist approaches merely focused on descriptive, small-scale ethnographies. Economic anthropology today became largely formalistic, with a focus on economic development in the Global South. The questions remaining are thus whether the naturalistic turn toward biologicistic explanations produces fruitful theories to account for cross-cultural differences and similarities in economic organisation. Can human behaviour be explained in terms of bio-psychological explanations? Why are bio-psychological paradigms cooperating with the Neoclassic formalist approach? This aspect will be scrutinised below. And further, how would a scientific macrosociological cross-cultural comparative substantivist approach look like that was failed to be developed after the substantivist’s orientation towards epistemological relativism? In our argumentation, we are hence working to the following fundamental question: What set of principles has produced fruitful theories in the explanation of social phenomena? Before discussing these remaining questions, let’s turn to an example of how ethnographic cases were discussed within the formalist-substantivist debate to illustrate and clarify the underlying principles.

3. The Potlatch Case

3.1. Introduction

In the following paragraphs, we will discuss the non-market phenomenon of the potlatch from various perspectives, to exemplify the formalist-substantivist discussion with this case study. Potlatch is hereby taken as an example of how differently particular paradigms account for the same phenomenon. We will thus see how the combination of certain principles brings forth actual theories. Potlatch is one of the highly debated and famous riddles of economic anthropology. The term potlatch has been defined as “ ‘a system for the exchange of gifts’, (...) ‘to feed, to consume’, ‘place of being satiated’. (...) [I]t consists of a festival where goods and services of all kinds are exchanged” (Editorial note, Mauss 1990: vi). It is characterised as an institution in which the hosting village gives a feast and gifts to the invited guests, often from another village. The more generous the feast and the presents were, the more prestige the host gained, which resulted in higher social status.

“[The potlatch] (...) redistributed food and wealth. It validated changes in social status. It converted the wealth given by the host into prestige for the host and rank for his numaym [the basic unit of society], and so provided motivation for keeping up the cycle of exchanges. The potlatch was, in fact, the linch-pin of the entire [socio-economic] system” (Piddocke 1965: 258).

Potlatch was practiced among various indigenous groups of the American Pacific Northwest Coast, in Washington State by the Makah (Kwih-dich-chuh-aht), in Alaska by the Haïda and Tlingit and in British Columbia by the Coast Salish, Haïda, Heiltsuk, Nuuchahnulth, Nuxalk, Kwakwaka'wakw, Tsimshian and Wuikinuxv. It is also seen as a feature in interior Dene and Athabaskan groups. Potlatches however varied among the respective groups in terms of formal rules and implementation practice. Potlatch was usually held at major social events, marking rites of passage such as funerals, births and marriages. The term itself is of general character, as different groups do have specific terms to denominate this type of gathering. Potlatch, a Chinook Jargon term for “gift” or “to give”, stems originally from the Nuuchahnulth language, formerly known as the Nootka, who inhabit the Southwestern parts of Vancouver island. The variation of potlatch within the different groups is important to consider, as the most detailed material on potlatches stems from one specific group of the Kwakwaka'wakw around Fort Rupert (today's Port Hardy) on Vancouver Island that was undergoing profound social and economic changes due to the previously established fur trade.

In the subsequent discussion, we will focus on the potlatch tradition of the Kwakwaka'wakw, as an extensive amount of literature concerns itself with precisely this group, however under the name of the Kwakiutl. Most commonly known as the Kwakiutl, this denomination actually only refers to the Kwakwaka'wakw group around the trading post of Fort Rupert, where Franz Boas, together with George Hunt, was conducting his fieldwork between 1885 and 1930. At the time Boas first arrived at Fort Rupert, the Kwakwaka'wakw population already had contact with Europeans for over 90 years.

“These are the people first described in detail by Franz Boas; they were characterized by an extraordinary efflorescence of their potlatch. Far from constituting an area-wide pre-contact phenomenon, the competitive potlatch ‘properly belongs to the realm of acculturation studies, not primitive economics’ (Ruyle 1973: 625)” (Wolf 2010: 191).

Through the great popularity of Franz Boas' works, the term Kwakiutl was wrongly extended to the whole collective of the Kwakwaka'wakw. Located in the northern parts of Vancouver island and the adjacent mainland coast, the Kwakwaka'wakw however consisted historically of up to 30 and today consist of 17 divisions. The Kwakwaka'wakw socio-economic system experienced unhinging Western impact at that time anthropologists set out for the Pacific Northwest Coast of America. In the following analysis, potlatch will serve as an example for a socio-economic phenomenon in transition.

The American Northwest coast is characterised by its temperate climate and heavy rainfalls, its vegetation by its temperate forests and its rugged coastal line. The native population were complex hunter-gatherer societies, differing from generalised hunter-gatherers in aspects such as mobility, subsistence, technology, population size and social hierarchies. As the Pacific Northwest groups depended on sea- and freshwater-based fishing, their mobility was much more restricted than the generalised hunter-gatherers' one, as they were largely alternating between winter and summer camps. In contrast to generalised hunter and gatherers, their subsistence involved meat and fish desiccation as a means of food storage, which is not found in generalised groups, for whom the immediacy of return principle holds true. Northwest coast-groups were not organised in mobile egalitarian groups, but in long-term villages with a population size between 100 up to 2000 people. Through their limited mobility, complex hunter-gatherers further didn't need light, portable objects and could invest more time in specialised hunting and fishing tools, such as technology like boats, canoes, nets, harpoons and spears. Their socio-economic system was characterised by the mode of integration of redistribution (Polanyi 1979: 133ff.), rather than the generalised groups' reciprocity. Hence,

the complex hunter-gatherers of the Northwest coast had social hierarchies, with social classes of slaves (mostly war-captives) and free people, the latter being subdivided into chiefs, elite groups and commoners. Commoners didn't have access to leadership positions, while the elite group inherited leadership, social status and land titles for hunting and fishing territories. (Maestri 2016)

3.2. *Formalist Explanatory Approaches*

Potlatch as Investment Strategy – The Kwakwaka'wakw Capitalists

The Neoclassic paradigm takes *Homo economicus* as ontologically universal, identifying non-market economies as only gradually different from the capitalist system. The formalistic approach in the explanation of potlatch only sees gradual differences between Kwakwaka'wakw and Western economic behaviour and largely draws from the apparent interest rate in the obligatory reciprocation of gifts received and the emphasis on competition and rivalry perpetuated in the early anthropologists' work. "Gifts are made and reciprocated with interest. There is a dominant idea of rivalry and competition between the tribe or tribes assembled for the festival, coupled occasionally with conspicuous consumption" (Editorial note, Mauss 1990: vi). The formalistic elements in the discussion surrounding potlatch originally stem from Boas' comparison of the Kwakiutl economic system with a capitalist credit system. This approach argues that the native's economic system only differs in degree, but not in kind from Western economies. The native population was maximising their utility in their particular context of values and norms. Albeit radically different from a Western context, it was still apprehendable within the same analytical framework.

"All their [the Kwakiutl's] possessions are invested in blankets, and in these a system of credit has developed. (...) As soon as a person receives blankets in payment for services or for sold objects he loans them out to those in need of blankets. They must be repaid with a high rate of interest, which ranges according to time and circumstances at from 25% to 300%. Thus the cautious and careful are able to build up large fortunes in comparatively a short time, although they may not possess more than a few blankets at a time. At a certain time they may have to repay a considerable debt to some one individual. This is always done publicly, and is made the occasion of much ceremony [i.e. potlatch]. Often at the same time blankets are presented to other members of the tribe. These must accept the present, but by accepting it become debtors to double the amount received. Thus the seeming squandering of property is actually no more or less than a profitable investment. Nevertheless a distribution of property brings honor and increased influence" (Boas 1896: 234f., emphasis in original).

The distribution of blankets with the accompanying obligation to reciprocate more blankets, has been interpreted as lending with interest, “Benedict has termed it ‘usury’ ” (White 1959a: 240). Boas frames the local population around Fort Rupert as capitalists, seeking maximum profit from rationally investing their resources, while at the same time increasing their social status. In doing so, he relies on methodological individualism, characterising the Kwakiutl as economising individual agents with an investment agenda. “Boas tells us that ‘the economic system of the Indians of British Columbia is largely based on credit, just as much as that of civilized communities’” (ibid.: 259). Here, formalistic gradualism is conclusive. In formalistic interpretations, potlatch resembles the imitation of stock exchange speculators.

Helen Codere in her later works defines herself as substantivist (Codere 1968: 575), however, her early works reverberate formalistic elements as she takes up Boas elaborations on the Kwakiutl. Codere’s works on the potlatch, following Boas in his studies, apply to the potlatches of the contact period, but also she takes into account a historical perspective and extends her analysis on the pre-contact era. We will characterise the post-contact potlatch which Codere analysed here, before turning to the pre-contact potlatch and its original functions. Codere works on the level of methodological individualism and the theoretical principle of idealism, as well as epistemologically humanities. Having written her dissertation under the supervision of Ruth Benedict, she aims to disprove Benedict’s allegation of the megalomaniacal, paranoid character of the Kwakiutl (for further elaborations see below), however, even though she elaborates her standpoint with a turn towards a historical perspective, she still perpetuates the same paradigm of the culture and personality school, as she seeks the falsification through the introduction of other – amiable – character traits of the Kwakiutl’s cultural psyche (Codere 1956). Further, she sees the potlatch embedded within “the context of a fantastic surplus economy” (Codere 1950, cited in Piddocke 1965: 253). Codere, similarly to Mauss (1990), portrays the goods received in potlatch not as free gifts, but as an obligation to receive and to reciprocate. “This gave potlatching its forced loan and investment aspects, since a man was alternately debtor and creditor for amounts that were increasing at a geometric rate” (Codere 1950, cited in Piddocke 1965: 254). Hereby, Codere links in her explanation the obligatory reciprocity to a system of borrowing-and-lending-at-interest, thus framing the Kwakwaka’wakw as capitalists. “Following Boas (...), Codere sees borrowing-and-lending-at-interest as an integral, indeed essential, part of potlatching, and a consequent continuous increase in the size of potlatch gifts as therefore also integrally part of the whole system” (Piddocke 1965: 254). This approach has however been refuted by Curtis (1915) who sets forth that property received in the potlatch had not obligatorily to be returned.

Returning a potlatch depended on the yearly yields of a group which depended on the environmental conditions the respective area was subjected to (Piddocke 1965: 255). Further, the institution of potlatch was no means to acquire material wealth, as goods received in potlatch were to be distributed within the group. Furthermore, not only was potlatch an institution to redistribute wealth, but on occasions, wealth was ritually destroyed. Boas himself “(...) became fascinated by the occurrence of destructive give-away feasts, or *potlatches*, which he insisted were beyond explanation involving economic causality” (Harris 2001b: 303, emphasis in original).

“Here was a whole people caught up in an exchange system that conferred greatest prestige on the individual who gave away the greatest amount of the most valuable goods. Since previous analyses of economic behavior had stressed the importance of husbanding the products of labor and of rationally apportioning work effort in relation to needs and consumption patterns, the Kwakiutl material was in effect the death-knell of homo economicus (...)” (ibid.: 307, emphasis in original).

It is this aspect of conspicuous wealth destruction, that was highlighted among the discussions surrounding potlatch.

Megalomania and the Obsession with Prestige

A cultural psychologistic account of the phenomenon of potlatch emphasises the alleged culture-specific psychological propensities of individuals. Due to its lack of materialist explanatory strategies, the cultural psychologistic paradigm sees as logical implication a tendency for formalistic reasoning. Taking the psychic unit of mankind as its central ontological assumption, theoretically relying on idealism and methodologically having the individual as unit of analysis, this paradigm reaches due to its congruence the same conclusion as Neoclassic formalistic approaches. As all people universally have the same basis in thought patterns, the central psychological mechanisms must be the same for all mankind. Cushioned in culture-specific milieus, they still follow the same logic (see Graphic *Psychologism*). Applying psychological reductionism to the empirical evidences of potlatch, its explanation goes as following: The drive for prestige as underlying motivation for potlatch was framed as competitive element of the potlatch and thus in a formalistic step, interpreted from the angle of a capitalist framework. The object of potlatch was understood as to give away or also to destroy more wealth than the opposed party. “Moreover, it was not merely that goods were given away, but that on occasions, so overwhelming was this passion for self-glorification, that blankets were ripped to shreds, valuable fish oil set on fire, whole villages

burned, and ‘slaves’ thrown into the sea to drown” (Harris 2001b: 307). By giving or returning gifts as well as by destroying valuable objects, “(...) one not only promotes oneself, but also one’s family, up the social scale” (Mauss 1990: 37). What bewildered formalistic interpretations hence was the amount of wastefulness and conspicuous consumption unmatched to any other society. This line of argumentation was set forth by cultural psychologist Ruth Benedict, arguing that the apparent irrationality of conspicuous waste was to be explained through the psychological traits of Kwakiutl society, rooted in the “minds” of the whole population. She described the Kwakiutl population as being of megalomaniacal character, by that ascribing psychological traits to a society as a whole. “The object of all Kwakiutl enterprises was to show oneself superior to one’s rivals” (Benedict 1960: 169). In a cultural psychologist manner, she imposes this characterisation to account for social and economic phenomena. “The whole economic system of the Northwest Coast was bent to this service of this obsession” (ibid.: 172). As we can thus see, Benedict’s paradigm of the culture and personality school consists on the methodological level of individualism, epistemologically accords to the humanities, theoretically it relies on idealism and ontologically the human being is characterised as a cultural being, only to be understood in terms of culture. The combination of methodological individualism and theoretical idealism enables this paradigmatic stance to heavily draw on psychological reductionist explanations.

Rationalising Irrational Man

For a moment, the destructive side of potlatch seems to constitute one of the “(...) apparent examples of exceptionally irrational uses of the means of production and the method of consumption of food (...)” (Harris 1959: 194), which would constitute a counterexample to disprove *Homo economicus*. However, it is not that simple and *Homo economicus* proves to be quite resilient. As we already have seen in Boas elaborations, he mentions the function of potlatch to increase social status. This line of argumentation anticipates already the formalistic position with an open concept of utility, which sees individuals making rational choices under conditions of scarcity in order to maximise their utility, which can be anything from material wealth, to social status, prestige, reputation, leisure or the like. “One might really say that the Trobriand or Tsimshian, although far removed from him, proceeds like the capitalist (...). Even pure destruction of wealth does not signify that complete detachment that one might believe to be found in it. Even these acts of greatness are not without egoism” (Mauss 1990: 74). Gift giving or wealth destruction never is disinterested, as through these acts a hierarchy gets established. “To give is to show one’s superiority (...)” (ibid.: 74). In his works, Boas

names the factors which are maximised through the means of the potlatch institution: material wealth through the obligation to reciprocate with interest, as well as social status. Even though Curtis (1915) challenges the alleged obligation to reciprocate, the increase of social prestige remains in all of the aforementioned writings on potlatch. So how to go about it in the formalistic line of argumentation? Through the introduction of the open concept of utility in economics, it is not only material wealth that has to be maximised in order to accord to the principles of Neoclassic, formalistic economics. With the right incentives, it is perfectly rational to destroy material wealth, if the utility gained from the destruction is higher than its loss. Through the high appreciation of social rank and prestige in Kwakwaka'wakw society, the destroyed material resources are apparently valued less than the social status achieved through their destruction. Hence, conducting a cost-benefit analysis, there is a perfectly rational explanation for the destructive nature of potlatches which conforms to Neoclassic economics.

3.3. *Substantivist Explanatory Approaches*

After having set forth some arguments that exemplify formalistic reasoning concerning potlatch, we will, in the following, introduce substantive accounts of the same phenomenon.

Potlatch in a social context

Substantivist accounts do not necessarily ascribe an economic context to any kind of phenomenon. On the contrary, “(...) culture in all its aspects – ideological, sociological, and technological – serves man’s inner, spiritual needs as well as his outer, material needs” (White 1959a: 10). Keeping the several aspects of human necessities in mind, potlatch can – on the structural level – be explained as an institution which serves the practicing group’s social needs and has, among others, the function of community building and social cohesion. Rather than being an economic institution, it is, first and foremost, a social one. Only because material goods are passed along and distributed, it doesn’t make the institution automatically an economic one. Potlatch primarily constitutes a social affair, and only secondarily an economic transaction (White 1959a: 240). The transfer of material wealth is a means to the end of establishing alliances.

“Merely because some sociocultural process has some obvious economic features, it does not follow that its chief significance lies in the context economic. It may be primarily a social ritual whose purpose is to serve psychic needs, such as conferring or transmitting honor, and in which the economic factors are of significance merely as means to this end. (...) It would

be unfortunate (...) to present and interpret a social ritual as an economic institution” (White 1959a: 240.).

This non-materialist substantivist account highlights the function of potlatch on the social structure of the society (Rosman and Rubel 1983; Roth 2002), or, through symbolic analysis, the socio-cultural meaning on the superstructure (Kan 1986). Held on the occasion of important social events such as funerals, marriages or births, potlatch functioned as a social institution to settle hierarchies and confer status to certain groups. This explanatory approach further hints at the integration of the economic system in the wider society. The interrelation and inseparability of institutions is paramount in the substantivist explanation of the potlatch. In the case of the specialised hunter-gatherers of the Pacific Northwest coast, the economic system is identical with its kinship organisation, therefore promoting cooperation and sharing. The mutual aid and social cohesion fostered on the level of the social structure, however, can be further examined in terms of a social security system as an expression of the infrastructural conditions, as will be discussed in the next subchapter.

Unpredictable Salmon, or: Why Ecological Conditions Matter

A scientific substantive materialist position informed by methodological holism and the theoretical principle of materialism, as well as the epistemological principle of science, offers a different explanation of the potlatch, focusing on the infrastructural level. Instead of a gradual difference supported by the formalist explanatory strategy, substantivist approaches identify a qualitative difference in the Kwakwaka'wakw socio-economic system. This position argues that

“(...) in aboriginal times, the potlatch had a very real pro-survival or subsistence function, serving to counter the effects of varying resource productivity by promoting exchanges of food from those groups enjoying a temporary surplus to those groups suffering a temporary deficit” (Piddocke 1965: 244).

The mode of subsistence of the Northwest coast's inhabitants of the 18th century constituted of fishing at sea and fresh waters as well as hunting wild fowl, land and sea mammals and gathering shellfish, berries, sprouts and roots. They depended largely on salmon and herring which were harvested during their annual upriver runs to their freshwater spawning grounds. The Nuu-chah-nulth additionally specialised in whaling. As these resources were confined to certain areas, the whole population of the coastline was involved in an extensive system of redistribution of resources – the potlatch. (Wolf 2010: 184)

“The islanders supplied the mainlanders with dried venison, seal oil, dried fish, shellfish, greenstone for tools, cedar bark, cedar-bark baskets, cedar wood for ceremonial artifacts, and yew wood for bows and storage boxes. The mainlanders furnished the islanders with hides and furs, cloth and clothing, olachen and olachen oil, cranberries, horn spoons, baskets of spruce roots, and Chilkat blankets” (Wolf 2010: 185).

As Wayne Suttles (1960) sums it up, there are four features of the environmental conditions at the Pacific Northwest Coast which are the determining factors in the socio-economic organisation of the local population. The significant aspects are the variety of types of food, the local variation, the seasonal variation and the fluctuation from year to year (Suttles 1960: 302). The variety of the types of food as set forth above, were unevenly distributed “due to irregular shore lines, broken topography, differences between fresh and salt water, local differences in temperature and precipitation” (ibid.), which led to local variation in the occurrence of resources. “(...) [C]ompetitive feasting (...) acts as an automatic equalizer of annual fluctuations in productivity among a series of villages that occupy different microenvironments – seacoast, lagoon, or upland habitats” (Harris 1989: 118f.). Due to seasonal variations, the local population moved over the course of the year from winter to summer camps. The fluctuations from year to year consist of regular cycles in the various fish populations, as well as unpredictable changes in weather conditions that affect the harvest of fish, berries, sprouts and roots. Hunger was not unknown among the local population. “Reasons given for such starvation included prolonged periods of bad weather which prevented hunting and fishing, and the failure of fish runs” (Piddocke 1965: 247). Variable water levels and temperatures for instance affect the salmon population strongly, which the local population relied heavily on. This fourth aspect of environmental conditions demanded adaptive capacity and resilience by the local population. “The rather pronounced differences in resources among communities, plus year-to-year fluctuations in quantities, must have put a premium on intercommunity cooperation” (Suttles 1960: 302). The institution which absorbed these external changes in the ecological system was the potlatch. As resilience-enhancing institution, it made the system of food production more robust and responsive in view of exacerbated conditions and temporary shortages in food supply in a certain area. The image of abundance and economic surplus painted by Boas and Codere is thus only partly true, as even if groups were experiencing bountiful yields at times, scarcity of food was still a continuous threat due to the varying productivity of the area. The distribution of resources during potlatch was thus a necessity for groups undergoing meagre yields.

“(…) [W]ithin this total socio-economic system, its [the potlatch’s] most important function is to be found neither in the expression of the individual’s drive for high status nor in the fulfilment of the society’s need for solidarity, neither in competition nor in cooperation, but simply in the redistribution of wealth” (Suttles 1960: 303, emphasis in original).

And wealth was directly or indirectly obtainable through food, hence the ability of a group to fish, hunt, and gather within the capacity of its ecological system.

“The drive to attain high status emerges from this interpretation as a prerequisite to the sorts of behaviour that keep the system operating. Satisfying this drive is a ‘function’ of the potlatch only in a secondary or instrumental sense (i.e. it serves an end that is only a means to another end …)” (ibid.).

Here, it is analytically important to highlight the difference between motive and function. “Functions are the ways in which a sociocultural trait contributes toward the maintenance or adaptation of the sociocultural system (...). Motives are the subjective orientations of the individuals engaged in behaviour” (Elwell 2013a: 15). The superstructure of the respective societies encourages and perpetuates the strive to attain high status as a motive, but not as a means in itself, than rather as a function of the underlying necessity of ensuring the group’s survival in times of food shortage. Individual prestige seeking doesn’t serve as ultimate rationale. The postulated *Homo economicus*’ strive for high status and hence higher utility does not serve as an end in itself in the explanation of the potlatch. It however serves as an emic explanation in the individual’s motivation for potlatch and thus, from an etic viewpoint, functionally ensuring the group’s survival.

“The potlatch is a part of a larger socio-economic system that enables the whole social network, consisting of a number of communities, to maintain a high level of food production and to equalize its food consumption both within and among communities. The system is thus adaptive in an environment characterized by the features indicated before – spatial and temporal variation and fluctuation in the availability of the resources” (Suttles 1960: 304).

This substantive approach takes into account the demo-techno-environmental-economic conditions and thus offering an explanation why the prestige-seeking motivations among individual Kwakwaka’wakw ensured raised levels of production which offered in its redistributive function a safety net in food crises and further explaining potlatch as a “(..) functional response to the problem of minimizing the effects of seasonal and long-term fluctuations in the productivity of the local groups” (Harris 2001b: 313). The redistributive function of this economic system is embedded in a set of social relations, kinship, rituals and

meaning, “(...) that may obscure the etic significance of the exchange behavior” (Harris 1993: 244). As we have seen, this substantive approach reflects methodological holism, and the theoretical principle of materialism, as well as epistemologically science.

A Tale of the Fur Trade

After having explained the potlatch's function in the time before the late 18th century in its original setting in a materialist approach, let us turn to the destructive potlatches described by Boas and Codere. How does the destructive side of the potlatch fit into a materialist explanation? In order to answer this question, we have to briefly turn to the historical settings of the time of contact between European fur traders and the local population. The first known trade between European navigators and the inhabitants of the American Northwest coast took place in 1774 between the Spanish ship “Santiago” and a group of Haïda (Wolf 2010: 184). In 1778, Captain Cook's ships landed at Nootka Sound on Vancouver Island, an area inhabited by the Nuu-chah-nulth, where Cook's crew acquired sea-otter skins to sell in China. In 1792, Captain Vancouver's expedition made contact with the Kwakwaka'wakw at Cheslakee's Village at the mouth of Nimpkish River on Vancouver Island (Piddocke 1965: 245). At that time, the North American fur trade route was already being developed, with its starting points in the settlements of Quebec, base of the company of New France, founded in 1608 and New Amsterdam, founded in 1624 by the Dutch West Indies Company. In 1644, the city was taken over by the English and renamed New York (Wolf 2010:161). From these two settlements, there was a rapid movement westward in the run for the inland resources, especially fur. “From the beginning, (...) the fur trade was carried on in the context of competition between two states [England and France]. This competition affected not only European traders but also the native American populations that provided them with fur” (ibid.: 161). European merchants were dependent on the native population's local knowledge and hunting techniques in the quest for sea-otter fur. While the maritime trade reached its peak soon after Captain Cook's first landing on Vancouver island, between 1792 and 1812, the overland fur traders shortly after reached the coast and established their first trading posts in 1805 (ibid.: 182). In 1821, the Northwest Company merged with the Hudson Bay company, fully systematically controlling the fur trade on the Pacific coast with the construction of forts such as Fort Simpsons among the Tsimshian in the estuary of Nass River in 1831 and Fort Rupert located at the North-eastern coast of Vancouver island in 1849, where four groups of the Kwakwaka'wakw settled which were later most famously known as the Kwakiutl described by Franz Boas, or also “the Fort Rupert's” (ibid.). The construction of Fort Rupert led to a

new and non-traditional source of income for the local groups, which led to changes in the social structure, as some groups acquired more wealth than others. “(...) [W]ith this new source of wealth there came changes in Kwakiutl society, notably an intensification of status rivalry and an increase in the frequency and volume of potlatching (...)” (Piddocke 1965: 245). Eric Wolf argues that a number of chiefs among the Canadian Pacific coastline of the Kwakiutl, Haïda, Tlingit and Tsimshian acquired many riches through their involvement in the fur trade with European traders in the 18th and 19th century. The fur trade had insofar economic and social implications, as the benefited chiefs used their economically strengthened positions to increase their reputation in potlatches that enhanced the expansion of their kinship relations through selective marriage policies, the expansion of their trade network and the strengthening of their social privileges. The Russians, English, and later the Canadian and European American traded sea-otter pelts for iron and other metals, later for goods such as clothes, blankets, rum, tobacco and molasses, while their trading partners were usually chiefs who had the power to mobilise a number of people to deliver the desired otter pelts (Wolf 2010: 185). The fur trade saw a fast influx of goods in the native American subsistence economies. Before, the items given at potlatches consisted of food, blankets and clothing. With the imported European goods, potlatches redistributed a wide range of products. The quantity of goods given away also increased in the post-contact times. Before, contradicting the theory of a credit system with interest, Helen Codere herself reports for the pre-1849 potlatches that they remained relatively constant over time and didn’t increase in size.

“During the six generations before 1849, each of about twenty years (...), five of the then potlatches mentioned are 170-220 blankets in size, in a size range of 75-287 blankets, and there is no trend toward increasing the size; the two relatively small potlatches of the accounts were given in the later years” (Codere 1961, cited in Wolf 2010: 191f.).

After 1849, the number of blankets redistributed increased rapidly. “A potlatch held in 1869 featured 9.000 blankets, one in 1895 over 13.000 blankets, and the last Kwakiutl potlatch in 1921 over 30.000 blankets (...), as well as other goods” (Wolf 2010: 192). The sudden influx of wealth stemmed in parts from the fur trade, in other parts also from Kwakiutl men working as day labourers in the town of Victoria in the southernmost part of Vancouver island, women working as laundresses and sex workers, as well as both men and women worked in an increasing number of canneries.

“The native Americans (...) came to rely increasingly on the trading post not only for the tools of the fur trade but also for the means of their own subsistence. This growing dependence pressured the native fur hunters (...) to commit even more labor to the trade (...). Abandoning their own subsistence activities, they became specialized labourers in a putting-out system” (Wolf 2010: 194).

The local subsistence economy hence changed into a gradual integration in a capitalist economic system. At the same time, the fur trade brought warfare and contagious illnesses with it that decimated the native population. Having no immunity to the diseases brought by the Europeans, outbreaks of smallpox and measles, as well as venereal diseases like syphilis, caused a devastating demographic decline of the local population of the Pacific Northwest between the 1770s and the beginning of the 20th century. In 1858 the news spread that gold has been found in the Fraser River, which led to the arrival of 25.000-30.000 male gold miners within months in the area. This arrival also led to increasing venereal diseases among the local population (Harris 2001b: 309; Wolf 2010: 192). The population of the Kwakiutl fell from 23.000 to around 7.000 between 1836 and 1853 (Harris 2001b: 309). “The Southern Kwakiutl, who numbered 7.500 to 8.000 in 1835, declined to 2.300 in 1881 and to 1.200 in 1911, a sixth of their number only 75 years before” (Wolf 2010: 192).

“The appearance of great wealth and ‘surpluses above any conceivable need’ in later, post-contact times was probably due to (a) the drastic population decline (...) ensuring that the productivity of sea and land (...) was more than ample for the survivors’ needs; and (b) to the increase in wealth coming from the sale of sea-otter furs to the fur traders and, later, to other non-traditional sources of wealth made possible by the contact situation” (Piddocke 1965: 253f.).

So while the volume of money and wealth increased, the population number was decreasing dramatically. The potlatches Boas and Hunt described were not merely held by chiefs, as was traditionally the case, due to the influx of new sources of wealth as well as the decline in population.

A Society in Transition, or: Why Context Matters

The destructive elements described in Boas’ and his students’ works thus most likely stemmed from the above mentioned events. “From 1849 on, they [the Kwakiutl around Fort Rupert] had been engaged in intensive trade with the Hudson’s Bay Company, and the groups with whom Boas worked had in fact drastically modified their way of life in order to take up residence adjacent to the trading post at Fort Rupert” (Harris 2001b: 302f.). The new sources

of wealth introduced to the traditional subsistence systems of the native population flooded the local economy and brought the whole system out of balance, permitting more persons than only traditionally the chief holding potlatches which increased the status rivalry and fierceness experienced by the early anthropologists doing fieldwork in that area. Further, as the population drastically declined at the same time as new wealth entered the economic system, there was proportionately much more wealth per capita than ever to be consumed, which leads to an explanation in the increased size of potlatches and the destructive elements of burning oil and blankets experienced by Boas, which came to be interpreted as “fantastic surplus economy” instead of a symptom of a socio-economic system in transition. Or, as Harris frames it more drastically: “(...) [T]hese [destructive potlatches] were the practices of a dying culture struggling to adapt to a new set of political and economic conditions; they bore little resemblance to the potlatch of aboriginal times” (Harris 1989: 129).

The fascination with potlatch in economic anthropology largely stems from its apparent wastefulness, from its “irrationality” due to its destructive elements. Piddocke however raises substantial doubts of the existence of destructive potlatches before the contact era. The account of destructive potlatches merely exist in post-contact literature, but seem not to appear in the pre-contact times. “The sacrifice potlatch and the grease feast are not mentioned in Kwakiutl mythology, nor does their presence in aboriginal times seem indicated by any other evidence” (Piddocke 1965: 256). It seems likely that the destructive elements of potlatch only developed during the 19th century, as native societies experienced profound economic, social as well as cultural upheavals. Another aspect of why potlatches became so destructive is suggested by Eric Wolf. “As the civil authorities of Columbia began to interfere with native warfare, the political functions of the potlatch in rivalry and alliance making probably intensified, ‘stopping the rivers of blood with rivers of wealth’ ” (Wolf 2010: 189). The same is suggested by Codere in her historical perspective on the potlatch in *Fighting with Property* (1950), stating that when native warfare was banished, the local population fought with property instead, “(...) which had become available on an unprecedented scale (Harris 2001b: 309). It is from this sketch-like historical reconstruction that we begin to gain an understanding of the impact the fur trade had on the local population. By illuminating the historical circumstances in which Boas’ and his students’ accounts are embedded, it becomes quite clear that the Kwakiutl group was undergoing major socio-economic changes at that point in history. These historical processes during the contact period were profoundly disturbing the previous conditions in which potlatches took place. Whatever interpretation is

given informed by different paradigms, fact remains that the Fort Rupert potlatches were the “definite product of the contact situation” (Harris 2001b: 311).

The period of potlatches ended within the 1920s, as the Canadian government succeeded in stopping the native population from potlatching, with an official ban from 1884 to 1951 in an amendment in the *Indian Act* (Gadacz 2015). However, at that time, money was already widespread. “It was possible to continue potlatching in defiance of the Canadian authorities by the device of going about with dollars and a notebook listing recipients and the amount each was to receive, checking each one off after payment” (Codere 1968: 570). Potlatching hence didn’t stop so much because of government intervention. It continued to be practiced adapted to the new circumstances, and only gradually died out as institution, when the local population became more and more integrated in the wider Canadian economic system. Through the integration into the capitalist system, the original purpose of potlatch lost its function. On the social structural level, traditional social relations had been disrupted, while on the superstructural level, native identities were transformed. Today, potlatch has seen a revival and is practiced on a small scale, however missing its original embedding and functions.

3.4. *Concluding Analysis*

Through this case study we could illustrate the very different approaches formalist and substantivist accounts take to explain a certain economic phenomenon such as the potlatch. We could detect the line of reasoning in different paradigms and exemplify how these approaches differ applied to the explanation of an empirical phenomenon. While formalistic explanations focus on the individual’s motivations in the participation in potlatches and apply Western economic concepts to analyse this non-Western socio-economic system, substantivist explanations rely on a methodologically holistic perspective, embedding the economy in the wider socio-cultural-techno-ecological context. The potlatch presents one of the most famous examples in the anthropological record, however, it doesn’t stand by itself. The principles underlying the analysis of potlatch can equally be applied to any other social phenomenon.

In a Neoclassic formalistic argumentation, the purpose of potlatch according to Boas “(...) is that of the interest-bearing investment of property” (Boas, cited in White 1959a: 241). However, as we have already discussed as a fundamental problematic of formalistic reasoning, the presence of similar elements however doesn’t automatically imply the existence of the same laws that govern market systems, this would be a typical formalist

fallacy. Economic activities in market systems may seem to resemble similar activities in non-market systems, yet its functions are of different character. Formalistic fallacies apply to the fact, that even if the same or similar objects or phenomena, that go beyond the satisfaction of basic human needs of bio-psychological constants (see Chapter 4), were detected in all (or at least nearly all) human societies (present and historical), they do not follow the same logic and function in every society, as demonstrated in multiple ethnographic evidence. This aspect is essential for our argument. The same form doesn't imply the same function. The comparison of the same forms is not identical with the same functionality. The formalistic mode of operation takes a certain, known, element as point of departure. When detecting a seemingly identical element in another context due to the congruency of its form, the context of the known initial element gets transferred to the new element, ascribing it the same function as the initial one. The analytical differentiation between form and function thus remain of central importance in order to avoid misinterpretations of phenomena.

The cultural psychologistic approach fails to explain why this evidently extreme form of seeking prestige was so distinctly pronounced among the Kwakiutl. This missing link is filled by a paradigmatic shift towards the linkage of status rivalry with the demo-techno-ecological conditions. Cultural materialist Marvin Harris turns Benedict's logic around by stating: "The economic system of the Kwakiutl was not bent to the service of status rivalry; rather, status rivalry was bent to the service of the economic system" (Harris 1989: 116).

In a move typical for a paradigm in distress through empirical evidence disproving the theories set forth by the particular paradigm, we further experienced the introduction of a new auxiliary hypothesis in the formalist line of reasoning: The open concept of utility, which also embraces and includes previously problematic evidence. Generalised utilitarianism offers an explanation to the purported irrationality of the destructive side of potlatching. And again, alas, a theory is saved through the introduction of an additional auxiliary hypothesis. Not even a severe anomaly will force adepts of a particular paradigm to eliminate their research program (Kuhn 2014: 90ff.; Wiltsche 2013: 106). On the contrary, recurrent anomalies will be included in the explanatory framework through the modification of the respective research program, as experienced in the potlatch case, but therefore fail to produce parsimonious theories.

The discussed difficulties in the theories of potlatch stemming from formalist paradigmatic positions hence arise from the confusion between form and function and the tautological nature of generalised utilitarianism which constitutes a swan song for science, as will be

elaborated in Chapter 5. In this case study, substantivist positions produced far more fruitful and productive theories, especially through their analysis of demo-techno-econo-environmental conditions. The analytic differentiation between motive and function enabled to answer the question of why prestige seeking among the Kwakiutl was so pronounced, by taking into account the historical transformation in the economic system, and thus providing a substantial explanation for the puzzling destructive elements of Kwakiutl potlatch.

4. The Naturalistic Turn – The Formalist Principle in Bio-Psychological Approaches and its Relevance to the Triumph of Homo Economicus

“Since the seventeenth century we seem to have been caught up in this vicious cycle, alternately applying the model of capitalist society to the animal kingdom, then reapplying this bourgeoisified animal kingdom to the interpretation of human society” (Sahlins, cited in McKinnon 2005: 71).

Formalist Economics has long made common cause with bio-psychological approaches on human behaviour. In accordance with the same underlying set of principles of epistemology, ontology and methodology, mutual support, acknowledgement and cooperation has strengthened these disciplines that present a “new intellectual consensus” (Crosthwaite 2013: 104). Economists have been incorporating findings from Sociobiology, Evolutionary Psychology and Neuroscience into their model of human behaviour, while, at the same time, Sociobiology adopted the economic discourse with their focus on the optimisation of fitness. Thus, standard economics and bio-psychological explanations have been mutually proven each other to be true; bio-psychological strands naturalising economic assumptions and transferring these natural universals of human behaviour back to economics to verify standard economic models.

“Already, models in ecology and sociobiology have borrowed heavily from the graphical methods of economics. Optimization and decision theory are routinely used. The utility measure of biology is genetic fitness (...). I expect that (...) the utility measures of economics and evolutionary biology will come to overlap broadly” (Wilson 1977: 136).

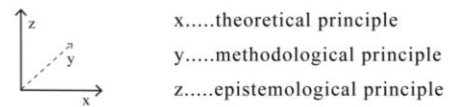
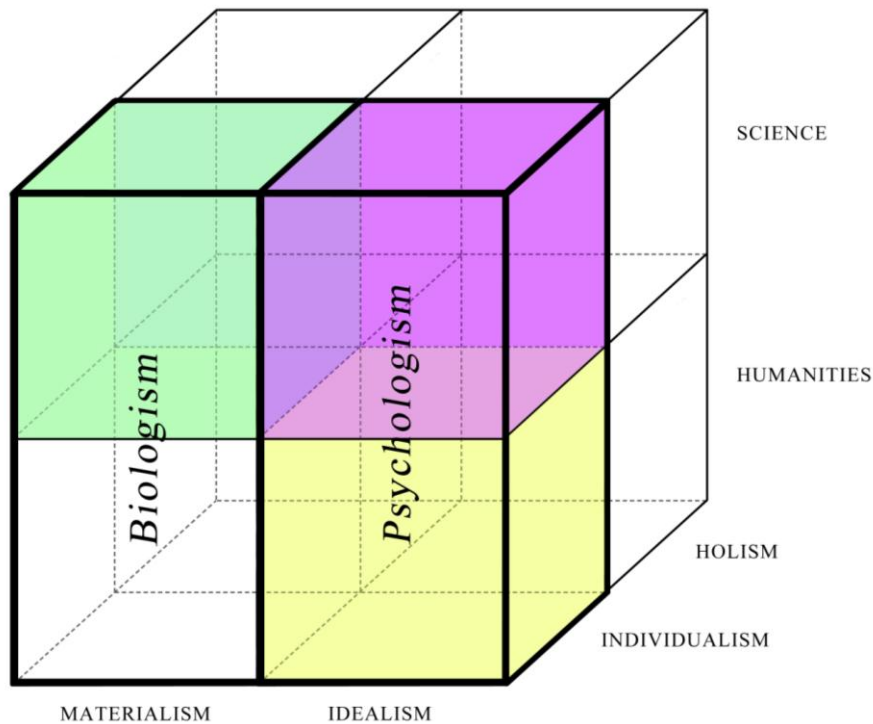
Apart from Sociobiology, also newer approaches such as Neuroeconomics manifest the symbiosis of economics and biology.

“If this evolutionary perspective is correct, then the ‘animal spirits’, which some economists indicate as the real key to comprehend why and how an economy fluctuates (...), might be, in part, deeply rooted in the relationship between genes, hormones, and neurological circuits that scientists have just begun to uncover” (Rinaldi 2009: 825).

The pending question which underlies our research focus is thus, why these approaches resonate so harmoniously and strengthen each other mutually. We find the main reason for this mutual confirmation in the same set of underlying principles and assumptions. Human Ethology, Sociobiology, Evolutionary Psychology and Evolutionary Neuroscience, even though distinct in their research focus, share a set of principles that form their respective

paradigm. Henceforth, a theoretical approach which includes the analysis of these underlying principles and their interrelation will be undertaken in the following paragraphs. Ontologically, the perception of humans as complex animals, only gradually different from animals and therefore comparable in behaviour is both to be found in the Neoclassic paradigm as well as biologicistic approaches. They do not identify any fundamental difference between man's and animals' behaviour. As through their assumptions only a quantitative, gradual difference is detected, representatives of these paradigms extrapolate from studies in animal behaviour to human behaviour. Epistemologically, bio-psychological approaches and formalistic economics commit themselves to the principles of science, as they aim at formulating natural laws that govern human behaviour. In this respect, both approaches also constitute accomplices with Cultural Materialism. On the methodological level however, formal economics and bio-psychological paradigms focus on methodological individualism, with the individual organism as the unit of analysis, or also the individual "mind"/brain (cell) or even as far as merely a set of genes. Sociobiology can clearly be categorised as theoretical materialism, as this paradigm takes the human genome as ultimate cause of human behaviour. Analogous to psychologism (see Chapter 2) is the reductionism seen by biologism. Due to the combination of the methodological principle of individualism, combined with the theoretical principle of materialism, this explanatory strategy detects biological constants (like the brain, the human genome etc.) as determinants for socio-cultural phenomena (see *Graphic Biologism-Psychologism*).

Graphic 5: Biologism-Psychologism



Neoclassic and Evolutionary Psychology, Sociobiology's allies, work on the level of the human "mind", which corresponds to the theoretical principle of idealism. While the paradigm of Sociobiology focuses on the level of manifest behaviour, Evolutionary Psychology "(...) rather (...) [uses] it as a heuristic guide for the discovery of innate psychological mechanisms" (Cosmides and Tooby 1987: 278f.). In a psychological reductionist step due to the combination of the methodological principle of individualism and the theoretical principle of idealism, socio-cultural phenomena and human behaviour are explained via mental modules or psychological dispositions rooted in the individual "mind".

The theoretical principle is thus somehow blurred due to the naturalistic turn, i.e. the shift of idealist approaches towards the "materialisation" of their assumptions, as seen in the "naturalisation" of *Homo economicus*. This shift is supported through the congruence of the respective paradigms on the epistemological, ontological and methodological level. Even though the aforementioned idealist approaches tend to ultimately try to root human behaviour in the brain, the postulated "mind"-brain link remains an assumption. We will further discuss

the concomitant analytical difficulties of the human “mind” as the starting point for theory building below.

A suggested core issue surrounding this discussion is thus if human behaviour is explainable through theories stemming from biologicistic-psychologicistic paradigms, or whether we have to turn towards other explanatory models. Is the alleged universality of *Homo economicus* predisposed in the human “mind”? If so, further, is this psychological explanation traceable to a biological foundation in the human brain? Eventually, as we will set forth, the maximisation of one’s genes is explained as the ultimate rationale of human action by the combination of economic and biologicistic approaches.

“By genetic individualism, I mean a conception of human social life that reduces social relations and human behaviour to the product of self-interested competition between individuals. These individuals (or their genes) calculate their interests according to a cost-benefit logic that has, as its goal, the proliferation of genetic endowments through natural selection”
(McKinnon 2005: 43).

Let us first examine bio-psychological models that seem to confirm the universality of *Homo economicus*. The aspiration of this chapter is thus to discuss biologicistic approaches such as Human Ethology, Sociobiological, Evolutionary Psychological and Evolutionary Neuroscientific approaches that support and strengthen formalist principles in economic anthropology and answer the question whether or not the assumed maximising behaviour of *Homo economicus* is a biologically determined instinct/mental module or has to be dismissed at all in favour of a culturalistic, substantive and holistic approach.

4.1. Homo Economicus as Homo Sapiens

As precedingly elucidated, proponents of *Homo economicus* claim the alleged innate “mind” patterns of individual utility maximisation to be a universal human drive. This assumption raises the question of human universals. It seems of particular importance to properly define the different possible and feasible levels and axes of universals in order to enhance a deeper understanding of which type of universals or rather universal thought and behaviour patterns we are dealing with in the present discussion. The noun “universal” itself refers to a substantive constant, an invariable quality, which is to be distinguished from the descriptive adjective “universal” that relates to a formalistic, categorical or structural understanding of the term, as in “universal principle”. Another level in the question of human universals is the axis of individual and group-based universals. Whereas biological foundations as the physical appearance are detected on the basis of the individual, alleged cultural universals are usually

claimed to exist on a group-level. This brings us to the next distinguishing factor. On an additional axis, universals can be differentiated into biologically/psychologically or culturally rooted. The bio-psychological constants which function as foundations of *Homo sapiens* present substantial universals in their strict sense.

Homo economicus, a concept that refers to claimed universal behaviour patterns rooted in the human “mind”, is thus to be categorised as follows. The concept corresponds to the individual level, which is reflected in the methodological principle of individualism. Being psychologically grounded in the “mind” of every individual human being and therefore identified as psychological disposition of *Homo sapiens*, it forms an ideational, non-material phenomenon.

Sociobiology – It's the Genes

The biologicistic paradigm of Sociobiology relies on the “rationality” of genetic selection, identifying as unit of analysis the human genome. “In the neo-Darwinist evolutionary synthesis, the social behavior of different species of animals evolves as an outcome of differential reproductive success among individuals” (Harris 2001a: 120). Due to the ontological assumption of humans being only gradually different from other species, the principles of Sociobiology, its new synthesis of natural selection with social behaviour, get transferred to *Homo sapiens*. The starting point in the aforementioned bio-psychological approaches can be defined as the assumption of biologically grounded human universals. Sociobiology and its predecessor Human Ethology seek to explain human behaviour in terms of biological principles through underlying evolutionary mechanisms. All human phenomena such as war, aggression, love, altruism, hate, basically all human behaviour in general are underlain by biologically determined universals and therefore explainable by biological and psychological explanatory approaches. Variations are dismissed as merely constituting cultural differences. Even though behaviour is culturally embedded, its fundamental mechanisms and logic is reducible and to be traced back to biological universals on the basis of the individual human genome.

In sociobiological approaches, the assumption of the environment of evolutionary adaptedness (EEA) is one of its central pillars. Generally, the EEA is the environment a species is adapted to. For *Homo sapiens*, it is characterised as a phase in human evolution where the main human thought patterns, instincts and biological determinisms were gradually programmed throughout millions of years in the constant environmental conditions of East African

savannah habitat, forming a certain adaption that is still underlying all individual human behaviour until the present day. Due to the long period of time over millions of years living in the same environmental conditions, the human organism has – through natural selection – genetically adapted to these particular conditions like competitive pressure and resource dependency, which are still inscribed in the human genome until today and program our thoughts and behaviour. “(...) [T]hese mechanisms are assumed to constitute innate and genetically inherited psychological features that have not changed since the Pleistocene” (McKinnon 2005: 21). The phase of EEA is broadly detected in the Pleistocene in East Africa’s savannah, where most human adaption was assumed to have taken place. Constant conditions over a very long period of time over thousands of generations in the assumed EEA allowed specific bio-psychological adaptations to stabilise via the mechanism of natural selection. The concept of EEA is of central importance in biologicistic approaches to human behaviour. The argument goes, that *Homo sapiens* until today is genetically adapted to the East African savannah biome, and the functional organisation of the human brain is selected for this habitat. Sociobiologists infer from the adaptive problems *Homo sapiens*’ ancestors faced concerning e.g. reproduction, nutrition and predators, the same behavioural mechanisms that are – genetically inscribed – still with us today. If we thus understand the particular conditions prevalent in EEA, we can explain today’s human behaviour.

To exemplify the paradigm governing these approaches, let us briefly discuss the “problem of altruism”²⁵.

“As is well known, the problem of altruism is central to the evolutionary theory of exchange, which has to explain why, and in what circumstances, an individual should be willing to benefit another individual at some cost to itself” (Hallpike 2011: 25).

Altruism is hereby defined as a beneficial action that increases the utility of someone else at the expense of the acting individual’s energy, time, etc. As assumed in approaches that favour individual selection (instead of group selection), “altruistic” behaviour constitutes a paradox, as, theoretically, every individual is in competition (for reproductive success) with every other member of the group (Sahlins 1977: 19). As human behavioural traits have been genetically selected, it has to be explained how altruistic behaviour has led to a higher survival rate. The solution to this apparent contradictory paradox has first been developed in Hamilton’s concept of kin selection, that “(...) consists of transforming social altruism into genetic egotism (...)”

²⁵ “The problem of altruism” is set in quotation marks to indicate that albeit altruistic actions do not pose a problem in real-life situations by themselves, they however undermine standard economics’ assumptions on human nature. Altruistic actions are thus problematic for the pillars of Neoclassic.

(Sahlins 1977: 20), which associates all social behaviour ultimately as governed by utilitarian individualism. These underlying laws of rational gene maximisation strongly suggest the same logic as utilitarian economics. “It would only be necessary to substitute genetic values for ‘utilities’ in the formulation of the Chicago School of Economics” (ibid.: 22). This so-called *inclusive fitness “theory”*²⁶ (IFT) constitutes a central pillar of Sociobiology, as it allows to extension of the principle of natural selection to “altruism” as defined above. Inclusive fitness takes not only the individual’s fitness, i.e. his or her reproductive success, into account, but extends the fitness to the individual’s kin group. As genes are shared with kin members, the individual will, according to IFT, display “altruistic” behaviour towards genetically related kin to maximise his or her gene pool. IFT indicates altruistic behaviour to directly correlate with the genetic relatedness.

Evolutionary Psychology – It’s the “Mind”

In an evasive manoeuvre of the biologicistic camp, as no specific genes for certain behavioural patterns could be detected, the proximate cause was shifted ultimately to the human mind, leading to the rise of Evolutionary Psychology. Similar to Sociobiology, Evolutionary Psychology argues that human behaviour can be explained as result of psychological adaptations of the mind to repeated problems *Homo sapiens*’ ancestors faced. An unspecified accumulation and combination of mental modules produces psychological dispositions and behavioural responses which were preconfigured in EEA. Evolutionary Psychology thus reduces human behaviour to evolutionary adaptations, assuming “modules” in the human brain, which, as human universals, are said to determine human thought and behaviour. In the same manner as Sociobiology, assumed modules are understood as constants independent from cultural influences. Cultural variations are thus only an expression of a combination of a multitude of modules selected in the African savannah and thus explainable via the same set of principles.

The postulated mental modules that determine human behaviour naturalise Neoclassic assumptions. “(...) [E]volutionary psychologists reduce social relations to a reflex of genetic self-maximization guided by the forces of natural selection” (McKinnon 2005: 1f.), so “ (...) that much economic behaviour may be the result of biologically based instincts to cooperate, trade, and bargain, and to punish cheaters” (ibid.: 3). Paradoxically enough, even though standard economics circles around rational decision-making, Evolutionary Psychology

²⁶ Set under quotation marks here, as the so-called inclusive fitness “theory” actually presents a principle.

negates any conscious choice at all at the level of the individual, but takes the decision-making process deeper on the level of innate modules that determine the individual's behaviour in a way that the behaviour always corresponds to rational genetic offspring maximisation. Rational choice is thus carried out on the level of "the selfish gene" (Dawkins 2006), or the mental module, respectively, via the "invisible hand of natural selection" (McKinnon 2005: 39).

"To generate a more encompassing order of sociality, evolutionary psychologists rely upon the concept of reciprocal altruism – a system in which an individual performs an altruistic act for another with the expectation of future reciprocation, a system that, it is understood, requires a mechanism for the detection of cheaters" (McKinnon 2005: 47).

A central assumption in these paradigmatic strands to account for altruistic behaviour is the principle of methodological individualism – genetic individualism, that supposes interactions between individuals, that initially act as strangers, to require an innate algorithm for cost-benefit analyses to answer the question of whether or not to reciprocate (Hallpike 2011: 25). The evolutionary psychologists Cosmides and Tooby introduced the "Social Exchange Module" as an innate module that, as a naturally selected predisposition in an individual's human thought, constitutes a computational mechanism to inform the individual how to act (Cosmides and Tooby 1992).

Evolutionary Neuroscience – Another Take on Innate Behaviour

Another example on how *Homo economicus* gets picked up and naturalised in biopsychological approaches, is Evolutionary Neuroscience. This approach is concerned with the evolution of nervous systems. Linking Evolutionary Neuroscience with the "problem of altruism", Daniel R. Wilson's theory of human reciprocal behaviour aims at providing a new theory of human behaviour. D. Wilson appeals to economics to integrate Evolutionary Behavioural Neuroscience into their models, namely the notion that human behaviour is not just governed by rational thought (which is detected as evolutionarily new complex of the brain), but from older "behavioral algorithms" (Wilson 2006: 630), also designated as "modules" in Evolutionary Psychology. These algorithms constitute innate rules for processing information that are associated with certain brain structures (Hallpike 2011: 18). D. Wilson identifies the "received model" of *Homo economicus* as deficient and proposes that we have to draw on Evolutionary Neuroscience to offer a better understanding of human reciprocal behaviour, which they understand as modules of the human "mind" that themselves

are rooted in the human brain. The “mind”-brain relation however is not further reasoned and remains obscure (McKinnon 2005: 27).

D. Wilson proposes to apply MacLean’s neuroethological model that describes three archetypal neuromental circuitries to explain human sociality (Wilson 2006: 627). He presents an evolutionary development of brain structures (“Reptilian complex”, “Paleomammalian complex” and “Neomammalian complex”) which he terms “neuromentalities” (ibid.: 628f.) to show that human behaviour is based on the legacy of archetypal brain structures stemming from older periods of “neuromental levels in evolution” (ibid.: 632). He concludes the following:

“Thus, the parent-infant bond that blends self-preservation genetic kinship circuitry with affectional circuitry in a reciprocal social relationship is, in fact, the foundation for extended social reciprocity (‘eusociality’ and altruism) that underpins human social life” (ibid.: 628).

Ontologically, just as the aforementioned bio-psychological paradigms, Evolutionary Neuroscience only sees a gradual difference between animals and humans and never tires of concluding by analogies between man and non-human species.

4.2. What’s Wrong With the Building Blocks

In the following subchapters, we will offer an empirical as well as analytical critique of the aforementioned bio-psychological approaches to the explanation of human behaviour. To ensure there are no misunderstandings, at this point I would like to emphasise that the validity of the principle of natural selection is not in question. However, the implications proposed by bio-psychological approaches are. We can show that biologicistic approaches can’t produce fruitful explanations of human socio-cultural differences and similarities, which will be discussed as the major weakness of biological reductionisms (Harris 2001a: 119ff.). Further, the central assumptions and concepts will be scrutinised, highlighting considerable deficiencies from a “philosophy of science-angle”.

Basis is Not Determinant

Certain biological foundations of *Homo sapiens* are commonly accepted in the scientific community and there is no disagreement that *Homo sapiens* has a nature. Clearly, there does exist a “human nature”²⁷, namely constant underlying biological universals shared by all members of our species, which are genetically determined. These bio-psychological constants

²⁷ For further discussion see Subchapter *The Nature-Nurture Debate Revisited*.

include (1) the necessity of food intake and generally the concomitant opting for diets rich in calories in cases of choice between varying diets, (2) the preference for efficient usage of energy when carrying out a task (expending less rather than more energy), (3) biological sexual differences and generally the seeking pleasure from intercourse, and (4) the need for affection by others (Harris 2001a: 63).

However, the biological foundations of the human brain and the faculty of speech that underlie all thought and behaviour do not account for the contents and substance of human thought and behaviour. The basis is not to be confused with the determinant factor. Paradigms such as Human Ethology, Sociobiology, Evolutionary Psychology, and Evolutionary Neuroscience, reduce socio-cultural phenomena to the bio-psychological level.

“The danger in postulating pan-human bio-psychological drives and predispositions is that one is tempted to reduce all sociocultural similarities to an imaginary genetic ‘biogram’, whereas most similarities as well as differences are due to sociocultural evolutionary processes. (...) [T]he human biogram (...) is relatively free from species-specific bio-psychological drives and predispositions. As a species we have been selected for our ability to acquire elaborate repertoires of socially learned responses, rather than for species-specific drives and instincts” (ibid.: 62).

Accordingly, the major contentious issue is the question of to what extent the biological foundations do influence and/or determine human thought and behaviour. “Hence the disagreement about the human biogram is entirely a matter of substance rather than of principle – that is, precise identification of the content of the biogram” (ibid.: 127). The distinction between basis and determinant is vital in the understanding of the contested issues surrounding the human biogram. The basis, in this case the bio-psychological constants, does not automatically provide an explanation for the theoretical principle of cause and effect. Even though bio-psychological constants serve as necessary foundation in the human experience, they do not necessarily determine it. This conceptual confusion between basis and determinant is common among biologicistic paradigms. Even though chemical, physical and biological phenomena are obviously necessary conditions for the explanations of social phenomena, they are simultaneously clearly insufficient (Sahlins 1977: 64f.). The question therefore is thus, to what degree biological explanations can account for the diversity in human behaviour and social phenomena. “Nor am I denying (...) the notion that culture and biological development reciprocally gave impetus to each other. But that does not mean that

the effect was an equal valence of these as ‘factors’ in human social existence” (Sahlins 2008: 106).

While the psychic and physical unity of mankind poses a generally accepted concept in the set of disciplines concerned with *Homo sapiens* (with the exception of maybe epistemological relativists), however, these foundations are also prone to biologicistic reductionism. Reductionisms, as indicated by the name, do reduce socio-cultural phenomena to their bio-psychological foundations which are taken as determinants in human thought and behaviour. So even seemingly straight-forward alleged biological universals have to be critically examined in order to avoid biologicistic fallacies.

Opening the Cultural “Black-Box”

Bio-psychological constants as basis of the human experience can’t explain the highly variable and diverse occurrence of cultural phenomena and therefore lack in analytical value. “The weakness of human sociobiology and all other varieties of biological reductionism arises initially from the fact that genotypes never account for all the variations in behavioral phenotypes” (Harris 2001a: 121). In the bio-psychological paradigms introduced above, variations are dismissed in a cultural “black-box” and no further accounted for.

“Yet we know very well that (...) human habitats, social organization, culture, technology and modes of thought have diverged in wildly different ways from the model of man in the EEA, so that evolutionary psychology [and Sociobiology] has no predictive value at all in these essential respects” (Hallpike 2011: 2f).

A “black-box” is a conceptual tool which converts inputs without the knowledge of its internal operation into outputs. The workings within the “box” remain obscure and left in the dark. Referring to this unclear process, the device or mechanism is called “black-box”. In this context, culture is used as the “black-box” device that transforms genetically determined behaviour into a seemingly endless variety of behavioural patterns, without further accounting for how this process actually works. “Black-boxing” is a typical evasive strategy. In this case it is used to circumvent the problem of explaining cultural differences. This approach however is unsatisfactory, as the “black-box” as *Deus ex machina* doesn’t solve anything, but rather ignores the lack of explanatory power regarding a certain phenomenon. To get to the root of the problem, thus, we first have to open the “black-box” and deal with culture itself.

To link the discussion surrounding bio-psychological explanations to the question whether *Homo economicus*’ behavioural patterns constitute a biologically determined universal of

Homo sapiens, let's integrate this question in the scrutiny of the cultural "black-box". *Homo economicus*' self-interested utility maximisation is claimed to be a constant in human behaviour and thus corresponds to the assumption of a genuine human universal, which has to be shown to lack analytical value, as it fails to account for diversity and variables in human behaviour, which are easily put aside in the pigeonhole of the cultural "black-box", and being prone to formalistic fallacies as discussed in the previous chapters. A substantivist explanation of an individual's behaviour has thus to be given in terms of his or her socialisation. Individual thoughts, behaviour and actions are to be explained as a function of the society the individual is socialised in.

"Mind" – A Fundamental Misconception

Another "black-box" is the human "mind". The alleged universal behaviour patterns of Evolutionary Psychology and other idealist approaches such as Neoclassic Economics and Cultural Psychologism, are identified to be rooted as a psychological disposition in the human "mind". The problem with the "mind" however is, that its existence and workings remain opaque, making it a "black-box" par excellence. The question of the "mind"-body relation has haunted philosophers and scientists for centuries. With regard of the principles, the assumption of "mind" corresponds to the theoretical principle of idealism. This point brings our analysis to the question of the human "mind" itself. In contrast to the brain which is a material, biological and verifiable fact, the "mind", as epiphenomenon, is not traceable or verifiable in itself. It remains an unfalsifiable assumption. Thus, the claim of universal behaviour patterns being rooted in the human "mind" turn out to be without substance and remain unverifiable.

"In short, it is virtually meaningless. A culturological inquiry into such matters as uniformity or differentiation in social structure, the mode of subsistence, the system of production and exchange, etc., would lead to more meaningful results than an appeal to a 'tendency of the human mind' " (White 1947: 689).

We are dealing with a false dilemma that prevents us from asking productive questions. According to White (1949), the problem of the relation between the material human body and the non-material human "mind" is of verbal origin. The reference to "mind" as a noun is misleading as it suggests a fixed entity. Referring to it as a verb instead, paints the picture quite differently. "Mind is *mind*ing; it is the behaving, reacting, of a living organism as a whole, as a unit" (White 1949: 50, emphasis in original). *Minding* is defined as the relationship of an organism with its external world. This activity of interaction with the

external, dynamic forces is a function of the body, which makes the *minding*'s locus the whole organism as a unit. The problem of the “mind”-body relation has failed to produce fruitful and productive theories, while a conceptual turn towards *minding* as behavioural function of the body deconstructs this sterile dualism. This necessary shift for scientific progress permits to ask different questions and avoids pigeon-holing “mind” in a “black-box”.

Challenging EEA

After having scrutinised the relationship between basis and determinant, the problem of “black-boxing” and the human “mind”, this subchapter will turn to another pillar of Sociobiology, namely the Environment of Evolutionary Adaptiveness (EEA). A quick recapitulation: The EEA is assumed as the formative habitat of *Homo sapiens*' ancestors, where over millions of years thought patterns, instincts and behaviour were gradually inscribed in the genome via the mechanism of natural selection. It is argued, that these behavioural patterns are still determining human behaviour today. In the following, I will set forth three main arguments against EEA. The first argument refers to the climatic conditions, the second argument is concerned with the emergence of language, while the third argument offers a theoretical argument stemming from the realms of philosophy of science. In the concluding remarks of this subchapter, I will introduce an alternative approach towards the reconstruction of our ancestors.

(1) According to Ferguson (2012), the assumed stability of the ecological environment of EEA gets challenged through the vast range of biome types throughout hominin²⁸ evolution. The assumption that *Homo sapiens*' ancestors passed millions of years in an arid savannah biome with extreme temperatures gets falsified through the fact that around the time of the last common ancestor East African grasslands were expanding with the simultaneous existence of extensive woodlands. *Ardipithecus ramidus*, *Australopithecus* and *Homo habilis* demonstrate physical adaptations for the woodland biome. What the empirical evidence suggests is that instead of one particular biome, *Homo sapiens*' ancestors were adapted to multiple habitats. Climatic oscillations further demanded flexible adaptation modes in the hominin's evolution. Rather than gradualist evolution in the stable environment of East Africa's savannah, climate fluctuations and biome changes led to precipitous evolutionary changes. Complex and volatile environmental conditions functioned as dominant selective forces, leading to high adaptability and great flexibility in the hominin's evolution. It is only with *Homo erectus* around 1,8 million years ago that special adaption to savannah habitat

²⁸ The term “hominin” designates modern humans, extinct human species and all of human's immediate ancestors (*Homo*, *Australopithecus*, *Paranthropus*, *Ardipithecus*).

appeared. The same time, however, marks the starting period of the hominin's migration out of Africa, perhaps even because of the extreme environmental conditions in the arid regions of East Africa. (Ferguson 2012: 6-11)

The EEA's postulated stable conditions that gradually supposedly functioned as selective adaptive environment for *Homo sapiens'* ancestors, can hence be refuted due to the lack of empirical backing. Further, apart from the environmental changes throughout the hominin's evolution in East Africa, the social organisation was also subject to major, radical changes.

(2) From *Homo habilis* onward through *Homo erectus* the hominin's brain size increased. It was with *Homo erectus* that *Homo sapiens'* ancestors started to construct their own adaptive niches with the use of fire and the technology of cooking, thereby massively intervening in the natural habitat (ibid.: 8). It is cultural adaption that enabled our ancestors to inhabit any biome in the world. "(...) [T]here must have been major changes in human social organization throughout the EEA from *Australopithecus* to modern *Homo sapiens*" (Hallpike 2011: 8), like the control of fire with a profound impact on social organisation and patterns of cooperation. The assumption of the stable and constant conditions doesn't hold true. Most importantly, "(...) [the] emergence of language, in particular, would have required a fundamental reorganization of the human "mind", and the strong probability is that this only occurred at the end of the EEA, or later" (Hallpike 2011: 34). The EEA thus would have been profoundly revolutionised though the late occurrence of grammatical language.

"The fact that we do not find any symbolic forms before the Upper Palaeolithic is particularly strong evidence that grammatical language had not developed, and consequently that the EEA was probably pre-linguistic" (Hallpike 2011: 16).

The emergence of the human faculty of symbolic communication and grammatical language most certainly transformed thoroughly all levels of human life.

"If one were to attempt to identify any single development in human evolution which could, potentially, have revolutionized the whole spectrum of human culture and behavior, then the emergence of complex, highly structured language would perhaps be the most obvious candidate" (Mellars 1989: 364).

Further, the EEA is supposed to have brought about constant adaption of behavioural patterns to a certain, specific environment. Yet, "(...) [the] subsequent history of the human race in the last ten thousand years (...) displays forms of thought, behavior, and social organization that are wholly different from anything that could have been predicted from what we know about

the conditions of life in the EEA. They *cannot*, therefore, be explained as adaptations to such conditions” (Hallpike 2011: 34, emphasis in original).

(3) Finally, and most importantly from an analytical point of view, we can readily detect circular reasoning, as today’s phenomena are explained by formed universals in the EEA. Yet, the EEA is reconstructed through the establishment of analogies with present phenomena, as our contemporary knowledge of the EEA proves to be far too sparse to allow drawing logical inferences (Hallpike 2011: 34). Although the physical conditions during that time in the area are quite well explored, “(...) by the standards of (...) social anthropology we know virtually nothing about the social relations and the organization of our ancestors in those remote epochs, and even less about their mental capacities” (Hallpike 2011: 2). “Thus, a hypothetical story of origins is made to stand as proof of the existence and universality of psychological mechanisms” (McKinnon 2005: 20). The explanans – the EEA – can’t independently be explained from the explanandum – present-day phenomena – which renders the argument a tautology, proving it superfluous in scientific reasoning. Consequently, the EEA is unable to come forth with fruitful explanatory models that account for variation in human behaviour.

“(...) [T]he scientific method requires that a hypothesis be tested against empirical data that have the potential for disproving it (...). It is precisely evolutionary psychology’s failure [and the failure of related disciplines that work with EEA] to do this that makes it ‘bad science’ ”
(McKinnon 2005: 120f.).

An alternative explanation in the attempt of a reconstruction of Palaeolithic adaption leads to the establishment of the following comparison. Contemporary hunter-gatherer societies are usually considered as crucially informative for the explanation of human evolution, as approximately 95-99% of human history humans lived as hunter-gatherers (Schmidbauer 1974: 304f.), and their structures of social organisation and economic subsistence system are the closest link to prehistoric societies of whom we only have archaeological evidences. The debate on revisionism in hunter-gatherer studies scrutinised the assumptions concerning the concept of “our contemporary ancestors”, it could be shown however, without denying their historicity, that primary hunter-gatherer societies are still in existence, i.e. these societies have never undergone a change in organisation or economy. A significant aspect hereby is that “our contemporary ancestors” are not put on the same level as prehistoric societies, but rather function as type of society with the same means of subsistence that enables comparison on the structural level. Ethnographic evidence (e.g. by Richard B. Lee 1968 and 1979, Lee and Irven DeVore 1976, Betty Hiatt 1970, Colin Turnbull 1961 and James Woodburn 1982) suggests

that contemporary hunter-gatherer societies are characterised as highly egalitarian social systems with an essential focus on reciprocity, cooperation and the lack of individual competitiveness (Schmidbauer 1974: 307). These evidences contradict biological explanatory models that assume competitiveness as an inborn, “natural” instinct, a bio-psychological human universal. Even though disproved by ethnographic evidence, the assumption of biological universals underlying all human behaviour and action is the fundamental tenet of *Homo economicus*. With this alternative approach towards the reconstruction of our ancestors, it could be shown that the asserted competitiveness purported in biologicistic paradigms and formalistic economics is missing in empirical evidences. Far from an instinctive aggressiveness, ethnographic material shows humans groups to rely particularly on cooperation and reciprocity, therefore disproving alleged inborn individual competitiveness.

A Re-Examination of IFT

Turning now to another key principle in Sociobiology, *inclusive fitness theory* (IFT), two empirical arguments will be brought forth in criticism, as well as a theoretical argument from a “philosophy of science-perspective”. As we have seen, IFT extends the fitness from an individual’s reproductive success to the individual’s whole kin group.

Albeit IFT seemingly solved the riddle of altruism, empirical ethnographic evidence shows numerous counter examples that disprove IFT (Hallpike 1984: 4ff.; Sahlins 1977: 17-67; Sahlins 2008: 46ff.). First, IFT assumes biological relatedness to be reflected in social kinship systems (Wilson 2000: 117). Anthropological kinship studies have disproved this assumption, or, as Sahlins terms it, a multitude of ethnographic cases constitute “empirical inconveniences” (Sahlins 1977:40) for IFT. The social structure does not reflect individual genetic interests, as kin groups do not mirror the genetic relatedness, but symbolic relationships according to the logic of the respective society. Cooperating social kin groups “(...) may be (...) favoured reproductively over other groups, but that is exactly the cultural point, and in direct contrast to a genetics of competitive self-interest” (Sahlins 1977: 41). For instance, in patrilinear societies, daughters do not carry on the lineage of their fathers. Thus, the Nuer of Sudan would describe their daughters as unrelated persons, which seems irrational to the genetic maximising imperative (ibid.: 32). Another example is commonly practiced infanticide in Tahiti, and at the same time, general high adoption rates in Polynesia (ibid: 48ff.). Both ethnographic examples contradicting the logic of gene maximisation-determinism of IFT, as adoption entails to waste limited, scarce resources on genetically not related children.

“(…) [N]o system of human kinship relations is organized in accord with the genetic coefficients of relationship as known to sociobiologists. (...) [C]ulturally constituted kinship relations govern the real processes of cooperation (...) [and] have an entirely different calculus than that predicted by (...) an egotistically conceived natural selection” (Sahlins 1977: 57).

Second, while sociobiological paradigm assumes only a gradual difference between animals and humans and thus impose the same principles detected in animal behaviour to humans, there effectively exists a distinction in kind. Kinship systems are uniquely organised in human societies, independent from natural relationships (Sahlins 1977: 58).

Third, as empirically any type of behaviour, from uncooperative to “altruistic”, from close kin to complete strangers, covers the whole range of behavioural possibilities towards kin and non-kin, the predictive value of the IFT approaches zero. A person acting in a way that reduces his or her fitness is in sociobiological terms merely rendered irrational (Wilson 2000: 117). To save the elementary concepts of Sociobiology, the concept of behavioural scaling was introduced as a paradigmatic rescue attempt, which is the “(…) variation in the magnitude or in the qualitative state of a behaviour (...) [whereby] the entire scale (...) is the genetically based trait that has been fixed by natural selection” (Wilson 2000: 20). If therefore any behaviour is feasible and just to be understood to be located on different points on the scale, this pseudo-argument doesn’t explain anything at all.

“For we now have the predictions that in some circumstances people will give benefits to, or ‘invest in’, their kin, and that in others they will give benefits to non-kin. (...) [This] amounts to nothing more than the affirmation that all the various forms of human reciprocity are biologically possible, in so far as some argument of natural selection can, on the basis of these theories, always be constructed to ‘explain’ any act of reciprocity reported by social scientists” (Hallpike 1984: 6).

The IFT has therefore no explanatory power in accounting for the differences in human behaviour and proves to be scientifically of no significance, as it fails to produce parsimonious theories. Ockham’s razor sends it regards.

The Modular Delusion

Evolutionary Psychology (EP) sees a repetition of individualistic reductionism. As evasive strategy to bypass empirical challenges that arose through the difficulty of mapping certain behavioural traits in the human genome, EP focuses on the human “mind”. It presents a casual shift from behaviour to thought. The problems stemming from the “black-box” of the “mind”

and the false dichotomy between “mind” and brain has been scrutinised above. Even though postulated as being genetically determined, the genes or brain regions corresponding to the assumed modules or “behavioural algorithm” are not detected and remain vague, unfalsifiable interconnections between the “mind” and the brain. The postulated modules which control behavioural reactions could not be localised via neuroimaging methods.

Empirical data on contemporary and historical hunter-gatherer societies, which are the closest hint on how our Pleistocene ancestors lived, shows that these societies live in small groups whose members are all known to each other. Without doubt, our ancestors did not live separately as anonymous strangers either, as is initially assumed in evolutionary theories of exchange (Hallpike 2011: 25). Social exchange and reciprocal behaviour are shown to be governed by clear cultural norms and rules and thus follow a very different logic than postulated through the “Social Exchange Module” of reciprocal altruism. Instead of relying on innate mental structures to calculate the expected costs and benefits from a social exchange, the empirical evidence on hunter-gatherer societies offer via a methodologically holistic approach on the group level a fundamentally different logic that proves the life realities of social groups quite unmodular.

On a theoretical level, EP’s postulated modules to come into existence through natural selection, each combination of every single variation would have to be selected from a random mutation and then constituting a selective advantage by contributing to inclusive fitness. Through the seemingly endless variety of random permutations and possible variations, the natural selection of mental behavioural modules via random mutation of EP becomes highly unlikely. (Ferguson 2012: 9) Further, in comparison to competing paradigms, EP presents superfluous assumptions that are unnecessary to explain hominin evolution and behaviour.

Unfalsifiable Neuromentalities

As its bio-psychological siblings before, Evolutionary Neuroscience takes behaviour to the level of naturally selected innate “neuromentalities”. As discussed above in sociobiological and evolutionary psychologist approaches, the assumptions of “neuromentalities”, just as “modules”, remains unfalsifiable. As any hypothesis grounded in assumptions of the characteristics of the human “mind”, Daniel R. Wilson’s approach is fundamentally problematic. Again, Evolutionary Neuroscience cannot account for the differences and varieties in the ethnographic record, and the striking gradualism puts human and animal behaviour in pigeonholes.

“(…) [T]heir [the evolutionary psychologists’] theory of mind and culture cannot account for either the evolutionary origins and history or the contemporary variation and diversity of human social organization and behaviour. (…) [The] assumptions about genetics and gender that underlie their theory of universal psychological mechanisms are not supported by empirical evidence from the anthropological record.(…) [T]his fiction has been created by the false assumption that their own cultural values are both natural in origin and universal in nature” (McKinnon 2005: 4).

A serious flaw in this line of reasoning stems from the fact that the assumptions of human thought and behaviour being, as a human universal, rooted via “modules” or “neuromentalities” in the “mind”, have, as a constant, no explanatory value at all to account for the tremendous variations in empirically substantiated thoughts and behaviours of human beings. *“Ex hypothesi*, they will be unable to solve problems they have never encountered before” (Hallpike 2011: 24, emphasis in original). Variables can’t be explained via constants. The impotency to account for variations in the behavioural phenotype is the significant weakness in the varieties of biological reductionisms.

“Natural selection (...) has repeatedly been shown to be a principle under whose auspices it is impossible to develop parsimonious and powerful theories about variations in human social life” (Harris 2001a: 121).

4.3. *Culture is the Human Nature – Thinking Outside the Bio-Psychological Box*

“The state of nature: ‘it is here.’ For culture is the human nature” (Sahlins 2008: 110).

The problem with biologicistic reductionism condenses in the fact that bio-psychological approaches do not make a difference between the categories of organic and superorganic phenomena. As set forth in Chapter 1, there exist qualitative differences between three classes of phenomena: inorganic, organic and superorganic. Organic phenomena emerged from their inorganic basis, requiring their explanation via a distinct set of principles. While inorganic phenomena are studied by the discipline of physics, the emergence of life, i.e. the existence of organic phenomena is scrutinised by biology. In the evolution of our species, the superorganic phenomenon of culture emerged from the inorganic and organic base via the emergence of the symbolic faculty of man. The superorganic is traditionally studied by sociology. Bio-psychological approaches however do not consider the emergence of culture as a qualitative difference and reduce superorganic phenomena to their organic basis. Analogous to reducing superorganic phenomena to organic phenomena, the reduction of organic phenomena to

inorganic phenomena would lead to contributions like stating that “(...) all species are constrained by their common carbon chemistry and by the laws of thermodynamics” (Harris 2001a: 135). Without asking the question of why polar bears are different from toucans, their differences would be reduced to stating that they are all made up from atoms and constrained by thermodynamics, just as the inanimate mountain range of the Alps. Indeed, we are inclined to answer, but this physical reductionist explanation ignores the fact that toucans and polar bears are alive and manifest a totally new quality in comparison to inorganic phenomena. This gradualistic explanation further ignores polar bears’ and toucans’ differences, failing to explain why one species lives as carnivorous mammal in the Arctic, and the other as frugivorous (and opportunistically omnivorous) near-passerine bird in the Neotropical realm. In an analogous manner, the ontological reductionism of merging animals and humans into species only different in degree, doesn’t explain the principles of culture. Through the negation of the existence of the superorganic as qualitatively different from the organic, the superorganic category gets “black-boxed”.

“The [naturalistic view] tends to attribute to innate human nature, taken individually and collectively, modes of thought and action which are in fact cultural products and achievements. This I have designated as the ‘naturalistic fallacy’²⁹, since it involves the attempt to deduce cultural forms from nature“ (Bidney, cited in Blumauer 2012: 12).

The same form doesn’t automatically follow the same function. So while Evolutionary Psychology is caught in formalistic reasoning and tries to explain human behaviour in terms of man’s brain structures, the explanation of the organic basis can’t provide information and conclusive evidence to account for the qualitative – substantive – difference that governs the human experience. What makes the human being human and therefore qualitatively distinct from animals is culture – the use of symbols. “We call the ability freely and arbitrarily to originate and bestow meaning upon a thing or event, and, correspondingly, the ability to grasp and appreciate such meaning, *the ability to symbol*” (White 1959a: 3, emphasis in original). How is the symbolic faculty linked to culture? “By *culture* we mean an extrasomatic, temporal continuum of things and events dependent upon symboling” (ibid., emphasis in original). Culture is a biologically emergent phenomenon which through its qualitative difference to its organic base is not subject to the same set of principles. The superorganic has to be analysed via a different set of principles.

²⁹ The term “naturalistic fallacy” refers here to the confusion between basis and deterministic cause-effect relation in biologicistic paradigms. Even though bio-psychological constants function as foundations of the human existence, they do not automatically determine it.

The emergence of man coincided with the origin of the ability to symbol. It is this faculty that distinguishes *Homo sapiens* from other primates in kind. “Sociobiologists [and other biologicistic strands] underestimate by several orders of magnitude the extent to which human cultures represent an emergent novelty” (White 1959a:122). In the same manner as Charles Darwin, bio-psychological paradigms maintain that “(...) there is no fundamental difference between man and the higher mammals in their mental faculties” (Darwin 1871: 34). The qualitative novelty of the ability to symbol however constitutes the reason why a gradualist conception of the difference between man and animals doesn’t hold true.

“Because human behaviour is symbolic behaviour and since the behaviour of infra-human species is non-symbolic, it follows that we can learn nothing about human behaviour from observations upon or experiments with (...) animals” (White 1949: 35).

White argues that this quantitative change through the gradual evolution of complex neural circuitry has led to a qualitative difference, a phenomenon of emergence, which cannot be explained via the same set of principles. The human brain is in relative and in absolute terms bigger than other primate’s brains. The increase in brain size suggests at some point in *Homo sapiens*’ ancestors’ evolution the emergence of the new quality in communication, namely the symbol as basis of human communication and cognition. To evoke White (1949): The symbol is the origin and basis of human behaviour. The symbolic faculty presents a biological phenomenon of emergence.

“So it looks as though relatively small alterations to the neurology must have produced very large discontinuities (‘saltations’, as one says) in cognitive capacities in the transition from the ancestral apes to us. If that’s right, then there is no reason at all to believe that our cognition was shaped by the gradual action of Darwinian selection on prehuman behavioral phenotypes” (Fodor 2001: 88).

Obviously the newly arisen quality, the symbolic faculty, as White designates it, is rooted in the brain as a biological constant (not determinant). This fact however doesn’t let us automatically infer that we are dealing with a gradual difference between humans and animals, this new faculty, as phenomenon of emergence, is subject to a new set of laws. Requiring a punctualist definition of *Homo sapiens*.

“To be sure, the symbolic faculty was brought into existence by the natural processes of organic evolution. And we may reasonably believe that the focal point, if not the locus, of this faculty is in the brain, especially the forebrain. (...) Thus a marked growth in size of the brain in man may have brought forth a new kind of function” (White 1949: 32f.).

Culture is an independent, new quality in the human experience, a system of information transfer constituting the superorganic. It is irreducible to biology, just as biology is irreducible to physics. Since the attempt to explain human behaviour in terms of biology and psychology only presented unconvincing (and in the context of EAA unscientific) results, we thus have to turn to the study of the superorganic. As biological approaches fail to explain intra-species wide range of variation in human behaviour, biology's "stepchild" culture, which is readily "black-boxed" in biologicistic approaches, might eventually be the key to the explanation of human behaviour. Human behaviour is symbolic behaviour, and varies thus not in degree from animal behaviour, but in kind. Symbolic communication allows to transmit technologies, tools, knowledge, beliefs, norms and behaviour patterns from generation to generation, this "great architectural edifice" (White 1947: 687) of culture.

"A people's behavior is a response to, a function of, their culture. The culture is the independent, the behavior is the dependent, variable; as the culture varies so will the behavior" (White 1959b: 241).

"(...) [F]rom the standpoint of subsequent behavior, everything depends upon the type of culture into which the baby is introduced by birth. If he is born into one culture he will think, feel and act in one way; if into another, his behavior will be correspondingly different" (White 1947: 687).

We can identify the human biological organism as the constant, but culture as the variable (ibid.: 688). Instead of trying to explain human behaviour in bio-psychological terms, we have to turn to explain it through culture. Cultural adaption allows faster and exacter adaption than the phylogenetic adaption which happens on random mutations in the genotype (Schmidbauer 1974: 303). Phylogenetic adaption is hereby defined as behaviour patterns that are passed on genetically, equally termed as "instincts". Cultural adaption on the other hand is not congenital, but acquired through learning processes within a certain social group.

"How do we know that Homo sapiens has been selected for the capacity to acquire and modify cultural repertoires independently of genetic feedback? The evidence for this viewpoint consists of the uniquely large amount of variation in the social response repertoires of different human populations. Even the simplest of human societies exhibit tens of thousands of patterned responses not found in other human groups" (Harris 2001a: 123f., emphasis in original).

Culture as a system of information transfer enables the cumulative passing-on of information over generations and isn't tied physically. Conducive human behaviour for group survival can

be much faster and better optimised through cultural mechanisms than through natural selection.

*“By progressively severing hominid cultural repertoires from genetic coding, natural selection conferred an enormous adaptive advantage on *Homo sapiens* – namely, the advantage of being able to acquire and modify a vast range of useful behavior far more rapidly than possible when genes maintain or regain control over each behavioral innovation” (Harris 2001a: 123).*

This step from phylogenetic evolution towards cultural evolution in *Homo sapiens* is essential in the explanation of the behaviour of human beings in the context of social groups. Cultural adaption as central mechanism in human evolution since the era of *Homo erectus* suggest that humans are not determined by their biological instincts, but rather by their socialisation (Schmidbauer 1972: 93).

“During all that time [since ancestral hominins and their closest pongid relatives have been separated around 5 million years ago], natural selection favored a behavioral genotype in which the programming acquired through learning progressively dominated the programming acquired through genetic change” (Harris 2001a: 134).

Human thought and behaviour are the results of a learning process, conditioned by the surroundings a person has grown up in. Instead of reacting to inner drives, humans do behave according to their socialisation and learning history. These learned responses can be transmitted and preserved in a social group and can be passed on over generations (Harris 2001a: 121f.). These “cultural repertoires” (ibid.: 122) can principally be developed independently from any reproductive success and natural selection. Cultural evolution is unique among all organisms (ibid.).

*“In effect, by enhancing the capacity and efficiency of human learning functions, natural selection itself greatly reduced the significance of genetic feedback for the preservation and propagation of behavioral innovations, (...) [which] conferred an enormous adaptive advantage on *Homo sapiens* – namely, the advantage of being able to acquire and modify a vast range of useful behavior far more rapidly than possible when genes maintain or regain control over each behavioral innovation” (ibid.: 123).*

Hence, the ontological assumption of *Homo economicus* with the inherent maximisation of self-interest as a basic human instinct in terms of natural selection has to be discarded in favour of socio-cultural factors that shape human behaviour.

“We come then to the following formula: human behaviour is the response of the organism man to a class of external, extra-somatic, symbolic stimuli which we call culture. Variations of human behavior are functions of a cultural variable, not of a biological constant. Human behavior as we find it amongst the various peoples in the world is to be explained therefore in terms of their respective cultures rather than by appeal to ‘human nature’ or psychological tendencies” (White 1947: 693, emphasis in original).

The Nature – Nurture Debate Revisited

We have shown thus, that culture, as superorganic phenomenon, presents an extrasomatic information transfer system which isn't physically bound (in contrast to genetics which is a system of information transfer which is physically bound in the human genome). Nurture can be defined as the process of socialising a human infant into its respective cultural system. The qualitative difference between humans and animals is man's use of symbolic communication, which cumulatively makes up a society's culture. Therefore, the ability of humans to communicate via symbols is what makes human beings human. Yet, nurture is part of nature, as inorganic, organic and superorganic phenomena make up any phenomenon there is, which is defined as nature. Hence the differentiation between nature and nurture is rendered ad absurdum in this sense.

If nature is however – as in bio-psychological approaches – understood as a genetic, innate predisposition in *Homo sapiens*, we could show that the assumption of human behavior being reducible to innate mechanisms of natural selection forms a naturalistic fallacy. This leads us to the following concluding remarks on biologicistic attempts to naturalise *Homo economicus*.

The Flaws of Naturalising Homo Economicus

Why have we undertaken such considerable efforts to scrutinise the seeming biological determinants of human behaviour? It is because *Homo economicus* teamed up with bio-psychological approaches in the explanation of human behaviour. It is because these paradigms reinforced and mutually endorsed each other, forming a formalistic bastion against substantivist accounts. This paradigmatic stronghold – seemingly impregnable at the first glance, presented however – upon closer inspection – considerable weak points. Summarising our arguments concerning biological reductionist explanatory models, following involved premises have been criticised: (1) Circular reasoning concerning EEA, (2) “black-boxing” of culture, (3) the inability to account for diversity in human behavior by assuming constant innate drives, modules or neuromentalities, (4) the unfalsifiability of the human “mind”, (5)

ontological gradualism in the analysis of the difference between animals and humans, as well as (6) methodological individualism in the explanation of social phenomena.

(1) The circular logic that underlies EEA has shown to constitute a tautology. As elaborated in Chapter 1, a tautology presents the logical fallacy of *petitio principii*. The premise is reasoned through arguments already regarded as true in the very same premise. The explanans is therefore dependent on the explanandum and cannot explain anything in itself. As already argued above, scientific theories have to be constructed in a way that they can be disproven, which is not the case for EEA. Hence, it constitutes an unscientific concept, which has to be discarded.

(2) The “black-boxing” of culture in bio-psychological approaches, which reduces culture to an opaque device that *somehow* (i.e. without further specification) transforms genetically determined input into a manifold output of cultural peculiarities. Evading thereby the problem of empirical material that doesn’t conform to bio-psychological explanatory approaches, the cultural “black-box” only presents a temporary solution to a fundamental problem, i.e. the inability of biological reductionism to account for cultural differences and similarities.

(3) Alleged universal inner modules or neuromentalities, as constants, fail to explain the diversity of cultural phenomena. They lack in analytical value, because constants cannot explain variables.

(4) The same problem of immunity against refutation that characterises EEA, also affects the concept of the human “mind”, which presents a mere assumption, that cannot be disproven. Therefore, the human “mind” doesn’t meet the criterion of falsification in scientific theory. The “mind”, too, presents to be a “black-box”. It is here, where neuromentalities and modules supposedly are inscribed and determine psychological dispositions and behaviour.

(5) In bio-psychological strands, *Homo sapiens* is ontologically treated as a complex animal. By building analogies between the behaviour of animals and humans, these paradigms imply cross-species universals that are subject to the all-encompassing principle of natural selection. The principles of bio-psychological evolutionary approaches take “(...) behavior from different phylogenetic levels which is merely analogous and derived from varying causes and (...) [imply] it to be homologous and derived from the same causes” (Leacock, cited in McKinnon 2005: 126). Through the phenomenon of emergence of the symbol, we could show that the difference between humans and animals is not only of quantitative, continuous character, but a difference in kind.

(6) The principle of methodological individualism, which is the underlying methodological principle of formalist economics and bio-psychological approaches, has shown to be inapt to produce theories that provide analytical explanations for social phenomena on the group level, especially in analysing culturally embedded human behaviour as well as economic systems. People are social beings that live in groups in which they are socialised by the interaction with others. Human thought and behaviour can only be effectively understood, if not the individual, but the group is the subject of research and the unit of analysis. Or, as Marshall Sahlins puts it:

“There is no such pre-social individual, no such thing as a human being existing before or apart from society. Humans are constituted, for better or for worse, within society, and variously so in different societies. In society they are born, and there they remain (...)”
(Sahlins 2008: 109).

Hence, we have to turn to the principle of methodological holism to account for social phenomena, and as we could see, human behaviour is inherently social. Therefore, the economic system is integrated as an inherent part of the wider social reality.

Despite the great fortifications, the formalistic fortress has fallen to these scientific arguments. *Homo economicus* is not a genetical endowment of *Homo sapiens*. The set of principles maintained by the formalistic approaches have shown to lack fruitful theories. We have reached a point in our discussion, where the following principles seem to present a promising alternative. On the ontological level, we could show that humans are to be analysed as complex animals *plus* their ability for symbolic communication. Hence, we have to turn our backs on gradualism and analyse humans via a new set of principles that stem from the emergent symbolic faculty. These principles are on the methodological level holism, because social phenomena underlie a different logic than the sum of its individuals, especially through culture as a means of information transfer system. On the theoretical level, we have seen that individualist approaches can't explain social phenomena, as individual emics do reflect a function of the system they are socialised in. Consequently, we have to turn to the theoretical principle of materialism to come forth with fruitful theories concerning group phenomena. The epistemological principle of science has proven to provide a set of analytical tools that allow to falsify theories as well as to reject unfalsifiable assumptions, hence convincing as fruitful to maintain.

5. A Scientific Critique of the Formalist-Substantivist Debate

In the previous discussion, we have repeatedly hinted at the tautological character of evasive strategies pursued by formalistic approaches in the face of empirical inconveniences. We detected tautologies on three levels – the opening of the concept of material utility towards subjective utility, the rationalising of seemingly irrational behaviour, i.e. the rationalisation of intransitivity and ultimately the animal turn which shifted the explanation of behaviour to the genetic level/level of the mind. In this chapter, we will discuss the problem with tautologies and suggest a more fruitful set of paradigms in the explanation of social phenomena and human behaviour.

5.1. A Scientific Refutation of Formalist Approaches

Man Maximises Because of Reasons

As empirical ethnographical material threatened to disprove the postulate of universal material utility maximisation, the formalist camp – as evasive strategy – readily had an additional auxiliary hypothesis at hand: The open concept of utility, i.e. the social embedding of *Homo economicus*. This approach, most famously developed by Nobel laureate Gary Becker, saw its beginnings already in Jeremy Bentham's writings, who mentions the pleasure of being on good terms with others, having a respectable reputation, and so forth as utility factor (Becker 1974: 1064). "Indeed, I have come to the position that the economic approach is a comprehensive one that is applicable to all human behavior (...)" (Becker 1976: 8).

"Economists usually assume that utility functions depend either directly on the goods and services consumed, or on household commodities produced with time and purchased goods and services. Social forces are either ignored or left to lurk in the background as part of the general environment. (...) The approach we take treats the social environment as arguments, along with goods and services, in a stable extended utility function" (Becker and Murphy 2000: 8).

Generalised utilitarianism rationalises altruistic behaviour, e.g. giving money to charity, due to interdependent utility functions. By doing so, even if a person acts "as if" they were altruistic and generous, the interdependency of other people's wellbeing with that person's utility function leads to the maximisation of their own selfish interests by giving for charity. Due to

the integration of the social environment into the individual's utility function, that person automatically internalises external effects on other people's wellbeing.

“(...) [A person] can avoid social opprobrium and perhaps ostracism by not engaging in criminal activities; achieve distinction by working diligently at his occupation, giving to charities, or having a beautiful house; or relieve his envy and jealousy by talking meanly about or even physically harming his neighbors” (Becker 1974: 1066f.).

Becker's great accomplishment was to mathematically formalise the behavioural implications of social interactions into rigorous analytical models, assuming the social environment to affect an individual's utility function, and also the individual vice versa affecting their social environment. Thus, without ignoring the impact of social circumstances on an individual, this approach still grants the individual agency to also influence and change their social environment due to interdependent utility functions. So, an individual's choice and action within a field of social determinants is emphasised by this methodologically individualistic approach. Accordingly, the application to interactions between for example family members reads as follows: “Assume that i cares about his spouse j in the sense that i 's utility function depends on j 's welfare” (ibid.: 1074, emphasis in original). In family economics, the interdependency of utility functions is explained by the *Rotten kid theorem*, postulating that family members, even if they are actually selfish, will simulate altruism and help each other, as an increase in utility of another family member, due to the interdependency of their utility functions, also leads to an increased utility of oneself. “(...) [A]n egoist has an incentive to try to simulate altruism whenever altruistic behavior increases his own consumption through its effect on the behavior of others” (Becker 1976: 288). Becker thereby contradicts Sociobiology's definition of altruism, which implies the increase in the fitness of others at the expense of one's own fitness. Due to the interdependency of utility functions, altruistic behaviour is rendered to be actually a selfish action. It does not necessarily reduce one's own fitness, because of the effects of the altruistic action on the beneficial behaviour of others towards oneself.

In order not to be misunderstood here, Gary Becker undisputedly has put much effort in analytical sophistication of his models which set an example for mathematical elegance. His achievements in this field are much appreciated and, above all, gave rise to the fundamental questions of how to scientifically analyse human behaviour. The central conclusion from his works however remains unsatisfying:

“This fictional hominid [homo sociologicus] is governed by the social norms that characterize his society. (...) He is admittedly not very useful for theoretical purposes as he stands, since, by equipping him with a suitably exotic set of norms, he can be used to rationalize almost any behavior observed in the laboratory” (Binmore 1998: 35).

The fundamental problem here is methodological individualism, i.e. the erroneous belief that the analysis of individual behaviour will lead to an explanation of broader socio-economic phenomena.

“Not is it unrealistic to write overly altruistic motivations into the preferences of homo economicus when using him as a model of man, there is also a danger that allowing oneself too much freedom in this respect will remove any bite from the model” (ibid.: 519, emphasis in original).

Man maximises because of reasons. Gary Becker shows that these reasons can be multifaceted and wide-ranging, integrating social interactions and the socio-cultural circumstances in his analysis. What is not accounted for however is the question of *why* a person is influenced in a certain way. It does not explain socio-cultural norms and values and their ultimate rationale, infrastructural conditions. Preferences are always *somehow* “given” in these models, and culture, even if honorarily mentioned, remains “black-boxed”. At this point thus, we hope to have clarified the scientific necessity of a paradigm shift, as the prevailing paradigm is not designed for answering these questions.

Open Utility as Tautology

“The power of economic lies in its rigor. Economics is scientific, it follows the scientific method of stating a formal refutable theory, testing the theory, and revising the theory based on the evidence. Economics succeeds where every other social sciences fail because economists are willing to abstract” (Lazear 2000: 102).

So let's scrutinise the claim of economics' scientific character. How “scientific” can it be if its underlying tenets present to constitute tautologies, therefore failing to conform to the laws of science, namely the possibility of refutation? Formalistic economic approaches do not produce theories that can be falsified. The fundamental tenet of science however rests on the demand to take the falsifiability of a system as the criterion of demarcation (Harris 2001a: 17).

“It seems in fact, remarkably difficult to find a test of profit-maximizing theory which does expose it to a serious risk of refutation, i.e., which does not require subsidiary assumptions that would provide untestable alibis in the event of a refutation” (Archibald 1960: 213).

As we have seen, through the open concept of utility introduced by Gary Becker as an additional assumption, the optimising principle becomes tautological. The open concept of incentives includes any possible motivation in human behaviour. The fundamental principle of economics outlines people’s motivation by incentives. “If we then define incentives as anything that motivates people, the tautology is readily apparent” (Stout 2014: 197). Bauman’s satirical take on Mankiw’s *Principles of Economics* (2004) further elaborates this point. One of the ten basic principles of economics, according to Mankiw, states that people respond to incentives (Bauman 2003). An incentive is defined as something that influences action and constitutes thus a synonym of “motive”. Reformulating Mankiw’s principle that people respond to incentives leads to the following statement: “(...) [P]eople are motivated by motives, or that people are influenced by things that influence to action. Now, this may seem to be a bit like saying that tautologies are tautological (...)” (Bauman 2003). In this way, “(...) the economists’ pretension to practice a predictive science” (Hann and Hart 2011: 162) is proven wrong.

“If you are sufficiently determined, you can always identify something that people try to maximize. But if all maximizing models are really arguing is that ‘people will always seek to maximize something’, then they obviously can’t predict anything, which means employing them can hardly be said to make anthropology more scientific. All they really add to analysis is a set of assumptions about human nature” (Graeber 2001: 8).

Or as David Kaplan frames it:

“(...) [Formal propositions in economics] are rendered immune from empirical test (...) because they are phrased in such a way that they seem to be applicable under any and all conditions. It is hard to imagine, for example, an instance of human behaviour that cannot be accommodated by the claim that all persons act so as to maximize something – utility, satisfaction, profit, psychic income, status, prestige or whatever. Since this assertion is compatible with all conceivable human behaviour, there is no way in which it can possibly be falsified. Such propositions (...) are empirically vacuous” (Kaplan 1968: 245f.).

The evasive strategy of the opening material utility to subjective utility has immunised this approach to scientific refutation, thereby violating the principles of science.

The Rationality of Inconsistency

Examining the puzzle of irrationality, i.e. intransitive³⁰ choices, *Homo economicus* again has a defence strategy at hand: The rationalisation of inconsistency. Rational choice is defined as making consistent choices over complete, transitive, consistent preference orders of choice alternatives. However, even intransitive preferences can be rationalised by admitting that circumstances change. “It is inevitable that so-called countertheoretical actions do not reveal the irrationality of the players, but the inadequacy of this application of the theory” (Blackburn 2010: 20). Intransitivity of preferences doesn’t mean a person submitted to the state of akrasia. Seeming irrationality gets rationalised through taking into account the broader context of decision making. Preferences might change over time in a dynamic model which means preferences get considered under new circumstances. This is also referred to as cyclical preferences or “framing effect”, a situation in which the decision-making situation itself influences the choice over alternatives.

“Rather, preference, revealed by choice, may include the preference for acting on any specific principle: the preference to keep a promise, or keep a vow to God, (...). [S]ometimes we are obliged to do what we would not otherwise have preferred to do; but this leaves it open that now, in the presence of the obligation, our preference is actually that we conform to the requirements of obligation or duty. The counterfactual preference that we would have had, had we not made the promise or felt obliged to cooperate, or whatever it is, is not our all-things-considered preference” (Blackburn 2010:14).

Through the rationalisation of inconsistency, empirical counterexamples are thus accounted for in the same framework. Again, the rationalisation of any possible action, like the concept of open utility, is formulated in a way that makes it immune to refutation.

The Animal Turn Re-Examined

Another evasive strategy comes with bio-psychological approaches such as Sociobiology that explain on the proximate level seemingly “irrational”³¹ behaviour with instinctive behaviour as the ultimate rationale. Sociobiology explains “irrational” behaviour as evolutionary selected product, therefore identifying rationality in man’s genes as ultimate causation of human behaviour (Wilson 1977: 136).

³⁰ Transitivity refers to the consistency of preference orders. If $A \geq B$ and $B \geq C$, then $A \geq C$. The violation of the consistent preference order is designated as “Intransitivity”.

³¹ The quotation marks hereby indicate that “irrationality” constituted a contested term. Wilson believes to have falsified seeming “irrationality”, by rationalising it with biologicistic explanations.

“It is now widely appreciated that human beings do not behave as rationalizing economic machines. (...) To the extent that the new parameters of human irrationality are interpreted as an evolutionary product, the methods of economics will converge toward those of biology” (Wilson 1977: 136).

Hereby, Wilson opens up the concept of *Homo economicus* to any kind of human behaviour, therefore not explaining anything at all due to its tautological character.

Ockham’s Razor Sends its Regards

“(...) [A] system of tautologies can be very useful in organizing a body of data, but it is certainly true that a tautology is without substantive content and hence cannot explain anything in itself. In particular, if one is seeking to explain why Eve chose a rather than b, it does not help to say that she prefers a to b when the definition of preferring a to b is that she didn’t choose b when a was available. More generally, it is too easy to explain a piece of human behavior by saying that the subject wanted to do it” (Binmore 1998: 519, emphasis in original).

We have identified several tautologies in the attempts to explain human behaviour. But what is the fundamental problem with tautologies? “(...) [I]f it were true that psychological egoism were a tautology like $2+2=4$, why would that be an argument against psychological egoism?” (Binmore 1998: 17). Man might maximise *any* kind of utility at all times. But even so, in a scientific approach, we don’t want to stop at this unsatisfactory point. This statement has no scientific value. Let’s recollect the criteria for systems to conform to the principles of science elaborated in Chapter 1: “It must be possible for an empirical scientific system to be refuted by experience” (Popper, cited in Harris 2001a: 17).

“The a priori assumptions economists use to describe rational action rest on a premise of utility maximization that can be criticized in terms of an inherent circularity and tautology. Whatever a man does in varying sociocultural conditions, that man, if he is rational, is held to be maximizing utility. Once the value parameters and alternative strategies are identified then we know he is not maximizing monetary profit then it must be some other satisfaction such as family solidarity or leisure. This post hoc reasoning back to a priori assumptions has minimal scientific value as it is not readily subject to falsification” (Prattis 1982: 212).

A tautology presents the logical fallacy of circular reasoning. The explanans is not independent from the explanandum. Through the circularity, the statement becomes always true and immune to refutation. In our case of the open concept of utility, this leads to

statements such as: “All human beings maximise, because any behaviour is maximising something, therefore, all man maximise.” The open concept of utility is not testable in a way to prove the hypothesis wrong. The criterion of falsifiability is however the main demarcation criterion to decide whether the hypothesis is of scientific character or should be dismissed as unscientific, as it cannot be falsified. Only hypotheses that are constructed in a falsifiable way qualify as becoming part of a scientific framework (Wiltsche 2013: 89). The open concept of utility presents a tautology (Büttemeyer 2014: 194), which, for the sake of parsimony has to be eliminated from the analytical toolbox. Analysing the tautology of the open concept of utility from the perspective of the principle of parsimony, we can readily conclude the following: “(...) [I]t is a philosophical commonplace to assert that Ockham’s razor can be wielded if an existence claim does not augment the explanatory power of one’s system of beliefs” (Sober 1981: 150). If a tautology thereby cannot explain anything in itself and consequently cannot explain anything at all, the necessity of applying Ockham’s razor seems logically self-evident. In Chapter 1, the law of parsimony, also known as Ockham’s razor, was introduced. If an assumption is not needed in the explanation of a phenomenon, it should be removed. The call for simplicity in science is linked with the criterion of falsifiability. As troubled theories can always be saved with ad hoc hypotheses from being falsified, the preference for simple theories enables a stricter, testable scientific framework. Although haunting generations of anthropologists and posing an insurmountable obstacle in the science of man, the “resistance” and persistence of *Homo economicus* as the incarnation of the formalist principle in economics and economic anthropology can thus finally be solved.

We have come to a point in our discussion, where formalistic paradigms have come under pressure over and over again. First, empirical inconveniences forced formalistic economics to open the concept of material utility to subjective utility. Second, the auxiliary hypothesis of the open concept didn’t withstand the scrutiny according to the principles of science due to its tautological character. Theories stemming from this approach have repeatedly shown fruitless results. What do these difficulties imply for the underlying paradigm? Let’s think again of the relationship between a paradigm and its theories elaborated in Chapter 1. A paradigm consists of a set of unfalsifiable principles. However, the theories stemming from a paradigm can indicate the quality of these underlying principles. “Paradigms can be compared with each other and evaluated (...) [by] their respective abilities to produce scientific theories in conformity with (...)” their predictive power, testability, parsimony, their broad scope and their integrability within a coherent corpus of theories (Harris 1994: 63f.). If a paradigm’s theories are repeatedly falsified or have to be adjusted through the introduction of ad hoc

auxiliary hypotheses, this indicates a fundamental sterility of the informing paradigm. By this means, the level of theories can indirectly give us information about the paradigm's scientific merit, indicating the necessity for a paradigm shift in the case of continuing fruitless theory building. What does this argument imply for the principles underlying the analysed debate?

The theoretical principle of idealism and the methodological principle of individualism, as well as the ontological principle of the gradualist human animal³² have shown the lack in generating fruitful, productive theories in the explanation of social phenomena and human behaviour. Therefore, acknowledging their limitation, we have to turn to another set of principles to develop more fruitful theories to explain the social realms of man.

5.2. “Scientific Substantivism”

So what principles have proven to be productive in the explanation of social phenomena and human behaviour in general? The empirical material showed the usefulness of only a certain set of principles. After having pointed out the sterility of formalistic approaches, let's revise the substantive side.

A main predicament of idealist-relativist-substantivist accounts was the rejection of the comparability of economic systems at all, turning to mere idiographic, descriptive accounts. Without separating emics from etics, a substantivist account of an economic system, (or, for that matter, any social phenomenon), becomes arbitrary. An idealist, relativist substantivism “(...) leads to a sterile impasse of subjectivity (...)” (Harris 2001a: 236). Learning from the idealist substantivist fallacies during the controversy, we can now focus on an up-to-date version of a substantivist economic approach that rises from the ashes of former substantivist inconsistencies and misunderstandings. How does an up-to-date substantive analysis of the economic system of a society then look like? How can the substantive approach towards economic anthropology be operationalised linking theory to empirical reality? How do we find our way out of epistemological relativism? By acknowledging the difference between etics and emics, we introduce a tool of scientific analysis which fosters objectivity and comparability. The aim of a materialist-scientific-substantivist approach is to formulate regularities that underlie all socio-economic systems. Considerable cross-cultural comparative explanation of social phenomena and human behaviour requires an etic perspective.

³² Here, the term “human animal” refers to the assumption of *Homo sapiens* only differing in degree from other species.

The principles thus most promising in the undertaking of the explanation of human behaviour are, as prerequisite (1) the epistemological principle of science. “It is because science is the best system yet devised for reducing subjective bias, error, untruths, lies, and frauds” (Harris 1994: 65). Science has the strength to establish criteria that promote strong theories, i.e. “(...) theories that make specific predictions that can be supported (or not supported) with reference to evidence” (Johnson and Johnson 2001: vii). Due to its standards of objectivity, validity, reliability and a systematic, logical research strategy, it allows verification and falsification of theories, which is an outstanding quality criterion for science. It is these criteria which allowed us to refute fruitless tautologies and to reveal the impasse of subjectivity in epistemological relativist approaches.

“(...) [T]he theories generated by cultural materialist principles are of broad scope and wide applicability, (...) they are highly parsimonious – explaining much with little – and (...) they form a compact, logically coherent, and interpenetrating set of answers to why human socio-cultural systems are both similar and different” (Harris 2001a: 78).

(2) The ontological level sees the punctualist definition of the human being as a complex animal plus the faculty to symbol, therefore differing in kind from other species. Due to the emergence of the symbol, the extrasomatic, cumulative information transfer system of culture made fast adaption to external circumstances possible. Not being physically tied, it is irreducible to biological explanatory principles, but presents a new quality that enables the intergenerational transmission of knowledge, technologies, belief systems and behaviour patterns.

Individual choices are culturally constrained, that they do not present to be real choices at all (White 1947). “(...) ‘[E]conomics is all about choice, while sociology is about why people have no choices’. To some, the tyranny of culture and norms over behavior is so complete that a theory of individual rational ‘choices’ is an oxymoron” (Becker and Murphy 2000: 22). This is a rather strong and limited reading of cultural determinism, as the analysis of individual choices clearly does give information about the prevailing socio-cultural preferences. Thus, the analysis of individual choices presents an emic approach, which in combination with an etic macro-analysis enables an integrated explanation of a prevailing system. But in its core the claim of individual choice constituting an inherent contradiction strikes an essential message. The analysis of individual choice does not tell us *why* these socio-cultural features took shape the way they did. It simply tells us that individuals react to their circumstances with culturally determined preferences. However, we want to explain which factors determine an individual’s choices, as it is not so much the individual who chooses, but their setting

within a specific socio-cultural milieu which eventually is determined by its demo-techno-econo-ecological context (Harris 1994).

(3) The methodological principle of holism has proven to be productive in the analysed debate.

“Social facts are not simply the development of psychic facts; the latter are in large part merely the continuation of the former inside people’s minds. This proposition is extremely important, for the opposite point of view inclines the sociologist at every instant to take the cause for the effect and vice versa. (...) Every time that a social phenomenon is directly explained by a psychological phenomenon, we may be sure that the explanation is false” (Durkheim 1938: 104).

Social phenomena have to be accounted for in a methodological holistic way, as the underlying rationale of an individual’s action does not lie in intrinsic motivations, but stems ultimately from the individual’s socialisation in a specific socio-cultural milieu.

(4) The theoretical principle of materialism sees a probabilistic cause of human behaviour in the infrastructure, i.e. the mode of production, the mode of reproduction and the environmental circumstances. These components interact most directly with the human biopsychological constants elaborated Chapter 4 and are therefore identified as vital interface in the mediation between the human biogram’s requirements and socio-cultural systems.

“The principle of primacy of infrastructure gives priority to the formulation of hypotheses in which etic behavioral components of infrastructure are treated as independent variables, while etic components of structure and superstructure are treated as dependent variables. The causality is far from absolute; it embraces a determinism that is probabilistic, yet calls for generalizations that make it possible to search for basic laws through careful data collection and hypotheses testing” (Johnson and Johnson 2001: xi-xii).

The primacy of infrastructure thus is not to be understood in a teleological, but in a probabilistic sense. This approach doesn’t claim that every single difference and similarity in socio-cultural systems is explainable through the level of the infrastructure. Some phenomena can obviously be the consequence of “arbitrary, idiographic events” (Harris 1994: 69). There do exist feedback loops of structure and superstructure. They are not passive, but interdependent and contribute to the continuation or change of particular infrastructural settings. Probabilistic determinism thus refers to the fact that the infrastructural level most likely is the casual root of socio-cultural adaptations on the structural and superstructural level, but not imperatively.

So how to go about the analysis of a socio-economic system with these underlying set of principles?

“As a guide to theory-making, the primacy of infrastructure enjoins anthropological researchers concerned with the explanation of sociocultural differences and similarities to concentrate on and to give priority to the formulation of hypotheses and theories in which components of the etic behavioral infrastructure are treated as independent variables while components of structure and superstructure are treated as dependent variables” (Harris 1994: 69).

The scientific—materialist-substantivist account of the potlatch presented in Chapter 3.3 gives an empirical example of operationalisation of this approach, which illustrates its scientific strength in the explanation of social phenomena and human behaviour.

5.3. Conclusion

What was the formalist-substantivist debate about? In its strict sense, the formalist-substantivist controversy analysed in this master’s thesis, was about whether a formalist approach can explain economic phenomena in non-market societies. And further, whether anthropology can contribute meaningfully to the agenda of economics. According to Scott Cook, a polemic representative of formalist economics, the formalistic approach is suitable and anthropology should keep out of economics.

“Economic anthropologists are best advised to let the economists speak to and about their own problems in scope and method, an enterprise they have intelligently pursued for more than a century without the intervention of interlopers from anthropology” (Cook 1969: 388).

Proving formalist economics wrong, we could show that even if economics indisputably advanced their models and contributed to the progress of economic analysis, they were socialised in a certain paradigm that relied heavily on ethnocentric assumptions. Anthropology, “(...) because of (...) [its] broad cross-cultural perspective, take[s] little in the way of human behavior for granted. For most generalizations about the way people live, anthropologists can cite exceptions to the rule” (Margolis 2000: 1). So yes, anthropology definitely drew attention to the inaccuracy of the alleged universality of the assumptions in economics’ models. Economics needs anthropology to prove their biased emic assumptions wrong in order to avoid the formalistic fallacy, as we have seen over and over again in the previous discussion, as for example with the imaginary land of barter in economics’ textbooks, an assumption which has been refuted numerous by the ethnographic evidence.

The debate in economic anthropology stands exemplarily for a wider theoretical discussion, broaching the issue of how to account for social phenomena and human behaviour in general.

In its wider sense, this debate presents a much more far-reaching dispute – a clash of paradigms. The new insights this master's thesis hopes to have established are the explanation of what sets of principles underlay the debate and their wider implications on academic progress in general. We could show that the identification and comparison of the underlying principles explains why the competing parties were taking at cross purposes and couldn't find common ground. Opposed paradigmatic positions were shown to be stipulated by incommensurable principles. Similarly, congruent sets of principles were detected in paradigms supporting and reinforcing each other. Formalist economics saw support from biologicistic approaches due to their homogeneity in their ontological, epistemological and methodological principles. Cultural Psychologism teamed up with formalist economics explanatory strategies due to their shared principles of methodological individualism and theoretical idealism. It could be demonstrated that underlying fault lines do not always run along clear dichotomous breaches, but are interwoven with other principles. Therefore, competing positions might conflict on certain levels, while finding common grounds on others.

Scrutinising the conflicting paradigms in terms of their scientific stronghold, we could show that formalistic explanatory approaches remained sterile in the attempt to explain social phenomena and human behaviour. Cultural influences have been neglected and "black-boxed" in favour of reductionist explanatory models, which however could not account for differences and similarities in socio-economic systems. In lack of explanations for empirical evidence that threatened to falsify their theories, formalistic approaches came up with ad hoc auxiliary hypotheses that however didn't conform to the principle of parsimony. The level of explanation has been shifted from the proximate to unfalsifiable ultimate causes. In a circular logic, *any* human action was explained as maximising something, referring to either modules and thought patterns in the unfalsifiable "mind" or evolutionary adaptations stemming from empirically untenable and falsified theories regarding the Prehistoric environment (EEA). Ignoring the explanation of qualitative differences between humans and animals on the ontological level, individual behaviour has been reduced to bio-psychological determinants. Failing to comply with the principles of science due to recurring logical fallacies of tautological character and the concomitant lack of parsimonious theories, as well as the lack of falsifiability of these theories, these reductionist explanatory approaches have been refuted in favour of scientific-materialist-substantivist accounts.

A scientific-materialist-substantivist research program also shows a way out of the epistemological relativism that the majority of substantivist positions succumbed to in the course of the debate. Merely idiographic, and descriptive substantivist positions failed to develop a research program that enables cross-cultural comparisons. By solely focusing on individual case studies these approaches dissipated in arbitrariness.

The most promising set of principles identified in the course of this analysis are thus the punctualist ontological account of the symbolic faculty of *Homo sapiens*, the epistemological principle of science, methodological holism and theoretical materialism. By simply asking different questions, this paradigm has the potential to provide a productive contribution to the explanation of social phenomena and human behaviour.

The reason why formalistic explanatory approaches have remained so popular until today in the Western world is that the formalistic explanations for human behaviour reflect and affirm the Western emic. Socialised in a capitalist system, the focus on methodological individualism in the emic superstructure is the logical conclusion of an individualism inherent in the system. Science however has the potential and analytical etic tools at hand to go beyond this self-referential and tautological formalistic explanatory framework. To paraphrase Schmidbauer (1972: 109): Could it be that standard economics has succumbed to a Western illusion?

6. Bibliography

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Abstract (English)

Addressing the question of how to explain human behaviour and socio-cultural phenomena, this thesis engages with the formalist-substantivist debate in economic anthropology to exemplify the clash of paradigms over the authority in explanatory approaches. The formalist-substantivist debate in economic anthropology centres around the applicability of standard economic theory to non-market societies, entailing the question whether or not *Homo economicus* – economic man – presents an appropriate model of man. The debate contains wider implications for general paradigmatic fault lines, as the question of human behaviour developed into a contested battleground of paradigms over the prerogative of academic explanations, drawing on biologicistic explanatory approaches. Examining the relationship between formalistic economics and bio-psychological accounts, the thesis analyses why these paradigms reached a consensus in the explanation of human behaviour, which is detected due to their homogeneity in their ontological, epistemological and methodological principles. Committed to the epistemological principle of science, the thesis hence scrutinises the underlying principles of the discussed paradigms and their interrelations, providing an analytical framework to evaluate theories regarding their explanatory power. Identifying the underlying principles in the debate, this thesis compares them with alternative approaches and assesses their fruitfulness in theory building. The Potlatch case hereby serves as empirical case study to illustrate the discussed explanatory strategies of formalist and substantivist approaches. Formalistic approaches present flaws on several levels, due to circular reasoning, ethnocentrism and the black-boxing of culture. Due to their inherent methodological individualism they are unable to explain differences and similarities in socio-cultural phenomena. Lacking explanations for ethnographic evidence that threatened to falsify their theories, formalistic approaches came up with ad hoc auxiliary hypotheses that however do not conform to the principle of parsimony. The theoretical principle of idealism is challenged due to the unfalsifiability of the human “mind”. Biologicistic reductionism exhibits ontological gradualism in the analysis of the difference between animals and humans and therefore lacks to account for qualitative differences. As a result of the detected logical fallacies and empirical inconveniences, an alternative scientific-holistic account is introduced which provides a fruitful explanatory framework by fully taking into account *Homo sapiens* ability to symbol as a phenomenon of emergence.

Abstract (German)

Diese Arbeit beschäftigt sich mit der Frage nach menschlichem Verhalten und soziokulturellen Phänomenen. Die Formalismus-Substantivismus Debatte in der ökonomischen Anthropologie zielt auf die Anwendbarkeit der Standardökonomie auf Nicht-Marketgesellschaften ab und wirft die Frage auf, ob *Homo oeconomicus* ein adäquates Modell des Menschen darstellt. Anhand dieser Debatte wird der Konflikt von Paradigmen hinsichtlich der Deutungshoheit von Erklärungsansätzen bezüglich menschlichen Verhaltens erörtert. Von formalistischer Seite wurde hierbei verstärkt auf biologistische Erklärungsansätze zurückgegriffen. Es wird analysiert, warum und inwieweit formalistisch-ökonomische und biologistische Paradigmen einen Konsens in der Erklärung menschlichen Verhaltens gefunden haben. Der Grund ist in der Übereinstimmung ihrer ontologischen, erkenntnistheoretischen und methodologischen Prinzipien auszumachen. Die Debatte gibt Aufschluss über allgemeine paradigmatische Verwerfungen in wissenschaftlichen Erklärungsmodellen. Anhand des erkenntnistheoretischen szientistischen Grundsatzes untersucht die vorliegende Arbeit daher die zugrunde liegenden Prinzipien der diskutierten Paradigmen, sowie deren Zusammenhänge. Sie liefert einen analytischen Rahmen, um Theorien hinsichtlich ihres Erklärungspotentials zu vergleichen und evaluieren. Das Phänomen des Potlatch dient als empirische Fallstudie, welche die diskutierten Erklärungsstrategien formalistischer und substantivistischer Ansätze illustriert. Formalistische Ansätze weisen durch ihre zirkuläre und ethnozentristische Argumentation Mängel auf mehreren Ebenen auf. Sie sind aufgrund ihres inhärenten methodologischen Individualismus nicht in der Lage, Unterschiede und Ähnlichkeiten in soziokulturellen Phänomenen zu erklären. Fehlende Erklärungen für ethnographische Evidenzen, welche ihre Theorien zu widerlegen drohten, konterten formalistische Ansätze mittels ad hoc Hilfhypothesen. Diese entsprechen jedoch nicht dem Prinzip der Parsimonie. Die Unfalsifizierbarkeit des menschlichen „Geistes“ zeigt die Schwäche des theoretischen Prinzips des Idealismus auf. Biologistischer Reduktionismus weist bei der Analyse des Unterschiedes zwischen Tieren und Menschen einen ontologischen Gradualismus auf und vermisst daher einen Erklärungsrahmen für qualitative Unterschiede. Als Ergebnis der festgestellten Mängel der logischen Fehlschlüsse und empirischen „Unannehmlichkeiten“ präsentiert die Arbeit als Alternative einen szientistisch-holistischer Ansatz, welcher einen fruchtbaren analytischen Rahmen vorsieht, in dem die Symbolfähigkeit des Menschen als Emergenzphänomen berücksichtigt wird.

