

Rhizomatic Human Communication and
Constructed Social Representations as Determinants
for
Consumption Preferences

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for
Consumption Preferences

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Abstract

The background of this research is the observation that mainstream economic theories cannot present an adequate explanation for emerging and changing consumption preferences in dynamic social systems. Scholars among the field of institutional economics, for instance North (1993), Boulding (1986), Sen (1977), and feminist economists such as England (1993) and Nelson (1993), have analysed and criticised neoclassical economics for this omission. Pluta (2010) points specifically at the hedonistic and utilitarian emphasis in mainstream economic theory and speaks of “an embarrassment to the mainstream” due to the lack of “an empirical verified 'balancing of forces'” in equilibrium models that “assume consumer rationality and maximization of utility” (p. 1155). Furthermore, Fehr and Schmidt (1999), Frey and Oberholzer-Gee (1997), Frey and Meier (2004) and Kahnemann (1994, 2002) present empirical evidence that refutes the neoclassical assumption of consumer rationality. Finally, Dolfma's (2004) study on preferences regarding pop music in the Netherlands emphasises that “behaviour and valuation need to be understood as institutionalized expression of underlying socio-cultural values” (pp. 48-49), and this idea serves as a main reference for this thesis.

Thus, the aim of this research is to analyse the advent of consumption preferences in social systems and institutions, including their change over time, with a synthesis of three theoretical frameworks: the social construction of reality by Berger and Luckmann (1966), communication in complex social systems described by Deleuze and Guattari (1987, 2004 [1972]) as rhizomes, and social representation by Moscovici (1994, 1998) and Moscovici and Marková (1998).

The potential benefit of this research is its contribution to the field of institutional economics through the development of a theoretical explanation for the complexity of social interactions, institutions and human behaviour and how they influence one of the most important economic issues, namely consumption preferences.

Finally, a case study of the German soft drink company Bionade Corporation is used to apply and evaluate the combined theoretical framework.

1. Introduction

[T]o be a complete economist, a man [sic] need only be a mathematician, a philosopher, a psychologist, an anthropologist, a historian, a geographer, and a student of politics; a master of prose exposition; a man of the world with the experience of practical business and finance, an understanding of the problems of administration, and a good knowledge of four or five languages. All this in addition, of course, to familiarity with the economics literature itself. (Shackle, 1953, as cited in Steele, 2004, p. 1052).

What truth does this quote by famous economist George L.S. Shackle (1904-1992) have? Taking a perspective from the philosophy of science, it summarises the opposition towards mainstream by economic assumptions such as consumer rationality, perfect competition, and market equilibriums. In opposition to these assumptions and to each other are established schools of thought such as Keynesian, Marxian, Austrian and Institutional economics and their existing variations (Weintraub, 2007). In particular, the dispute between John Maynard Keynes (1883-1946) and Friedrich August Hayek (1899-1992), Austrian school, appears here as historically memorable (Goodspeed, 2012), yet they are both heterodox economists and not part of the mainstream economic thinking. Over the last century each school of thought has had more or less influence on political and social history. Without going into detail, well known political outcomes of these schools of thought are US American Reaganomics (Niskanen, 1988), British Thatcherism (Driver, 2011), Russian socialism (Mukherjee & Ramaswamy, 2000) and German social market economics (Friedrich, 1955).

Another example is a recent public blog-debate between Steve Keen (2012a, 2012b, 2012c, 2012d, 2012e) and Scott Fullwiler (2012) on the one hand and Paul Krugman (2012a, 2012b, 2012c, 2012d, 2012e, 2012f, 2012g) and Nick Rowe (2012) on the other. Central points of the blog debate were the instability of financial markets as proposed by Minsky (1992), and the role of corporate and central banks regarding money creation in the light of the economic crisis of 2008. The discussion of the latter point was focused on whether only central banks are able to create money, a major assumption in some market models, or not, as Fullwiler (2012) claims. Considering the historicity of economics, this debate or conclusions from it may have an influence on future politics, too.

A similar, but more substantial debate occurred in Germany after 2008, which

culminated in a dispute over methods in economic science. This debate was mainly due to the financial crisis and the retirement of many university professors, and was also fuelled by public debate in German newspapers (Sinn, 2009). The core of this debate was the inability of classical economists to predict the financial crisis and to give adequate policy recommendations. The absence of descriptive models, or non-compliance in the case of Minsky's (1992) theory, led to serious doubts and critiques of mainstream schools of thought.

What the quote from above implies, and what makes it so significant, is the demand for a methodological pluralism rather than a pure critique of singular economic assumptions. Understanding economics means understanding human behaviour in all its complexity, and not just relying on mathematical modelling. Steele (2004) concludes that “science itself is a manifestation of social evolution,” where it “provides mappings, that is, stylised patterns, of the phenomena of the senses” (p. 1051). Both the critical examination of economic assumptions and the demand for methodological pluralism have motivated this thesis, which therefore belongs to the discipline of institutional and evolutionary economics.

In a narrower context, this thesis is focused on the topic of consumption preferences and the assumption of consumer rationality. The decision to pick these two points out of the pool of economic assumptions is based on Dolfsma's (2004) study on the emergence of preferences for pop music in the Netherlands in the 1960's. Dolfsma's (2004) work serves as key reference in this research, because it shows that preferences for pop music cannot be explained by mainstream economist's views on consumer rationality. He describes social interactions and what he calls the social value nexus as implicitly constitutive for preferences. Another reference, somewhat removed from the topic but worth mentioning, is a study by Friedman (1990) about an African ethnic movement called La Sape in which members identify themselves through expensive dress codes. In this thesis, I will introduce a new extrinsic perspective on the topic of consumption preferences, otherwise known as expressions of human social interaction, because mainstream economic theories fail to present an adequate image of human beings and their social behaviour and desires and how these emotions affect consumption preferences.

This thesis describes the advent of consumption preferences, including their changes over time, by synthesising three theoretical frameworks. These underlying frameworks are the social construction of reality introduced by Berger and Luckmann (1966), which

constitutes an institutional framework, the theory of social representations by Moscovici (1988, 1994, 1998) and Moscovici and Marková (1998), which conceptualises social interactions and social knowledge and finally, the theory of rhizomes mooted by Deleuze and Guattari (1987) as the underlying structure for complex communicational processes. Based on Dolfsma (2004), amongst others, I have derived the following research questions, to which this thesis will use the theoretical synthesis to find an answer:

Does verbal and non-verbal communication between individuals and their social groups, illustrated by the theory of rhizomes (Deleuze & Guattari, 1987), generate and change consumption preferences through social representation (Moscovici, 1988, 1994, 1998) within an institutional framework based on the model of social construction (Berger & Luckmann, 1966)? If so, how does the process work?

This thesis' theoretical synthesis is distinct from the work of Dolfsma (2004) and his social value nexus because it presents a more detailed and dynamic explanation of social interactions and evaluative processes. The complexity of social interactions necessitates adequate 'mapping', as Steele (2004) emphasises. Mapping in this thesis is done by means of theoretical synthesis, which in the case of the rhizome (Deleuze & Guattari, 1987), can be understood literally. This thesis provides a framework for understanding how social reality is constructed and, via social representations, how underlying social knowledge (Moscovici, 1988, 1994, 1998) is communicated, "which enable[s] people to make sense of the world" (Potter & Edwards, 1999, p. 448). The construction of an individual's social identity and its meaning is discussed as well, followed by an explanation of consumption preferences as evaluative judgements, based on what is traits are positive or negative in different identities (Scherer, 2005).

The remainder of this thesis consists of four chapters. Chapter 2, a literature review outlines economic assumptions important to this thesis, their historicity and major critiques of these assumptions found in the literature. Furthermore, chapter 2 introduces institutional economics as an alternative school of thought, and describes the history of its evolution. This is followed by a discussion of literature describing consumption preferences, human behaviour and communication theory, supported by psychology and behavioural economics. Chapter 3 outlines the theoretical synthesis that provides an ontological and methodological justification for this thesis. Additional discussion on methodological complexity supports the rhizomatic emphasis of communicational acts.

After that, the three frameworks are presented in detail in the following order: first, the rhizome (Deleuze & Guattari, 1987), second, the social construction of reality (Berger & Luckmann, 1966) and third, social representations (Moscovici, 1988, 1994, 1998). Additional literature is presented that validates the theoretical framework by illustrating their meaning in real life environments. This additional literature also shows the value and meaning each theory provides in other fields of research. This comparison illustrates how the study of economics can benefit from the application of these frameworks, because they have been successfully applied in other social sciences. Finally, a synopsis provides a synthesis of the ideas presented in chapter 3.

Chapter 4 consists of a case study of German soft drink company Bionade Corporation that deductively tests the usefulness of chapter 3's synthesis. In 2000, the Bionade Corporation used an unorthodox low-budget-marketing strategy that created consumer awareness by hitting "the zeitgeist exactly, appealing to health-conscious consumers who were drinking less beer just as they were embracing organic food and drink" (D. G. Smith, 2007, para 9). The case describes how Bionade's soft drink triggered evaluative judgements of identities induced by underlying social representations, and elucidates which social representations may have led to the development of the soft drink in the first place. A specific methodological justification for the case study design is given beforehand, in order to clarify well-known issues discussed in the literature.

Finally, the fifth chapter summarises the discussion of advantages and disadvantages of this thesis' theoretical approach. Further research opportunities are also discussed in the concluding chapter.

2. Literature Review

Before presenting the theoretical synthesis, which develops an alternative perspective to mainstream economic theory, it is conducive to critically examine existing mainstream theoretical literature to emphasise the issues regarding consumption preferences, one of the fundamental aspects of human beings in economic science. Therefore, this chapter discusses existing neoclassical frameworks, and presents critical and alternative explanation from the field of institutional economics.

First, an assessment of neoclassic theory is given together with introductions of important economists who have contributed to this theory, followed by critiques which focus on points necessary for this thesis. Literature describing institutionalism is also reviewed in lights of its historical development. Finally, the literature examining consumption preferences from a socio-cultural perspective, and communication theory literature is presented to delineate the specific focus of this thesis.

2.1. An assessment of neoclassical theory

In order to critique neoclassical economic theory, it is necessary to examine its basic assumptions. Economic science, as a sub-discipline of social science, specialises “in patterns of activity featuring production, consumption, distribution and exchange” (Steele, 2004, p. 1051). While social science focuses on human interactions, economic science has, to some extent, abandoned the human being and replaced it with an artificial, self-motivated and absolutely rational individual. Frankfurt (1971) describes this type of individual as wanton, a person who “does not care about his will. His desires move him to do certain things, without its being true of him either that he wants to be moved by those desires or that he prefers to be moved by other desires” (p. 11). This special kind of rationality is a key assumption in neoclassical methodology, in addition to the equilibrium models that are similar to pre-Einsteinian physics concepts (Mirowski, 1989; Pluta, 2010), or the Cartesian ideal of Descarte’s philosophy (J. A. Nelson, 1993).

In the following section, Adam Smith (1723–1790), Francis Edgeworth (1845–1926) and Lionel Robbins (1898–1984) are presented as well-known representatives for the mainstream paradigm. Smith's work is fundamental to economic science and he is

considered to be the father of the discipline, while Edgeworth's and Robbins' argument serve as supporting examples of neoclassic reasoning.

2.1.1. Adam Smith (1723–1790)

The basis for those the modern neoclassical economic framework and its driving forces was already established early in the history of economic science. It is Adam Smith's (1869 [1776]a, 1869 [1776]b) famous quote, “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” (p. 15) that expresses the core assumption of neoclassical domination. Interestingly, more than a decade before he wrote *The Wealth of Nations*, he developed a socio-moral philosophy in *The Theory of Moral Sentiments*, in which he explains that conscience arises from in social interactions (A. Smith, 1761 [1759]). Therein Smith (1761 [1759]) argues that:

We soon learn to set up in our own minds a judge between ourselves and those we live with (...) who is neither father, nor brother, nor friend either to them or to us, but is merely a man in general, an impartial spectator, who considers our conduct with the same indifference with which we regard to that of other people. (pp. 207-208)

Smith (1761 [1759]) further argues that this internal judge, or impartial spectator, is necessary in order to confront ourselves with moral judgements and act agreeably in the society in which we live.

At first glance, one might identify a contradiction between the pursuit of individual self-interest in *The Wealth of Nations* and the moral concern for social groups in *The Theory of Moral Sentiments*. However, a short look at the second 'creation' by Smith (1869 [1776]a, 1869 [1776]b), the invisible hand, solves this contradiction. According to Bishop (1995), the invisible hand “will transform the individual's pursuit of gain into the general utility of society” (p. 165). Therefore, Robbins, Medema and Samuels (1998) assume that Smith would have argued that the impartial spectator would judge the pursuit of self-interest positively, due to its contribution towards a general social utility. Secondly, Bishop (1995) highlights an important difference between self-interest and the impartial spectator. While the self-interest is considered to be the primary motivator for economic activity the impartial spectator explains the origin but not the motivation of moral judgements. Thus “Smith never claims it is an important motivator for human actions” (Bishop, 1995, p. 168). A final conclusion is drawn by Ashraf,

Camerer and Loewenstein (2005), who review the complete works of Smith and propose that his world is actually inhabited “by rather multidimensional and realistic human beings” (p. 142), rather than a one-dimensional entity. Likewise, McCloskey (2008) concludes that the impartial spectator is Smith’s way of explaining complex human beings driven by various virtues. To underline this argument, she refers to the sixth volume of *The Theory of Moral Sentiments*, in which Smith (1790) writes:

The man who acts according to the rules of perfect prudence, of strict justice, and of proper benevolence may be said to be perfectly virtuous. But the most perfect knowledge of those rules will not alone enable him to act in this manner: his own passions are very apt to mislead him; sometimes to drive him and sometimes to seduce him to violate all the rules which he himself, in all sober and cool hours, approves of. (p. 215)

McCloskey (2008) also argues that Smith chose the “virtues of courage, temperance, justice, and prudence” (p. 50) and love, or benevolence, as central to his virtue ethics, and that prudence alone was misunderstood by later economists. The fact that Smith was an ethical philosopher was ignored by later economists (McCloskey, 2008). Furthermore, Smith saw the propensity to barter and exchange as an essential part of human nature, although it remains open whether the propensity arises from instinct, or is a result of the faculties of reason and language (A. Smith, 1869 [1776]a). In addition, the complexity of modern societies accounts for the need to cooperate and the dependence of individuals on others (A. Smith, 1869 [1776]b). Herewith, Smith (1869 [1776]a) bears resemblance to the sociologist Mead (1934), who belongs to the representatives of American Pragmatism. Mead’s conclusion, indicating the similarity, is that “minds and selves are essentially social products, products or phenomena of the social side of human experience” (Mead, 1934, pp. 1-2). The question for the reciprocal connection between Smith (1761 [1759]) and Mead (1934) is comprehensively discussed by Costelloe (1997). Thus, the main focus of human action within societies is to ensure that one's self-interest will mostly be satisfied by supporting others in pursuing their own interests. In Smith's (1869 [1776]a) eyes, this is the reason for the division of labour in economies. Instead of self-sufficiency, individuals seek specialised professions out of self-interest, a necessary logical conclusion which he describes well:

The certainty of being able to exchange all of that surplus part of the produce of his own labour (...) encourages every man to apply himself to a particular occupation, and to cultivate and bring to perfection whatever talent or genius he

may possess for that particular species of business. (A. Smith, 1869 [1776]a, p. 16)

Yet, Smith (1869 [1776]a) sets limitations on that phenomenon, declaring that this self-interest not only induces, but also constrains the division of labour. He explains that the specialisation increases with the size of human settlements, and those rural regions populated with families with a higher degree of self-sufficiency, are less likely to have a diverse scope of labour than cities, due to the required increase in cooperation and communication. Furthermore, he defines the “power of exchanging” (A. Smith, 1869 [1776]a, p. 18) as the market size that determines specialisation. Clearly, he sees the market as a consequence of human nature itself. Furthermore, Smith (1869 [1776]a) regards the division of labour as the defining variable for economic phenomena, such as commodity price levels and the use of money. He also refers to historic examples of cultures in which labour division played a central role in the development of agriculture and other socio-economic systems.

2.1.2. Francis Edgeworth (1845–1926)

However, let us return to the assumption of self-interest, which is kept alive in economic science due to its simplicity. Edgeworth (1881, as cited in Sen, 1977) explains that “the first principle of Economics is that every agent is actuated only by self-interest” (p. 317), although he himself was well aware of the unrealistic nature of this principle (Sen, 1977). The answer to the question of why Edgeworth was working with an assumption he did not believe in is simple. First, he only distinguishes between egoism and utilitarianism as motivation for human actions in economic terms, and ignores the existence of motivations that are not economically driven. Yet, he draws a distinction between “higher parts of human nature” that induce “a tendency towards (...) utilitarian institutions” (Edgeworth, 1881, p. 52) and the self-interested behaviour which we find in war, trade and contract negotiations (Sen, 1977). Given that, Edgeworth (1881) was aware of the existence of other motivations for human actions, but he saw them as not significant in economics. Finally, in his introduction, Edgeworth (1881) justifies that mathematical reasoning is in fact a suitable method for economic science and draws an analogy “between the Principles of Greatest Happiness (...) and those Principles of Maximum Energy (...) [in] which mathematical reasoning is applicable to physical phenomena quite as complex as human life” (Edgeworth, 1881, p. v). Clearly, he constructs a materialistic world view in which the human spirit can be

represented by mathematical principles with local maxima and minima, not just for economics but for all social sciences. Edgeworth (1881) elucidates his hypothesis through the conclusion that pleasure is concomitant to energy itself, and that man is nothing more than a simple “pleasure machine” (p. 15). Therefore, his sum of total universal happiness, achieved through increasing pleasure, is equal to the sum of total energy in Newtonian physics equilibrium models. Here we can see the conceptual similarities between economics and physics as described by Nelson (1993) and Mirowski (1989). They will be further dealt with in the sub-chapter following the one about the third contributor I want to present.

2.1.3. Lionel Robbins (1898–1984)

The third contributor to literature describing the economic man is Robbins (2007 [1932]) who writes that “economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses” (p. 15). He proposes that a fundamental concept of economics is scarcity, and if a good is not scarce, but free, it is not subject of economic science at all. Furthermore, Robbins (2007 [1932]) tries to adjust the image of economic man compared with, what he describes as a false assumption of an entity “concerned only with money-making and self-interest” (p. 87). Contrary to his belief, most economic analyses deal with scales of relative valuation of those scarce goods with alternative uses. Thus, it is not in the realm of economic science to explain why valuation of goods occurs in the first place. It is a given fact and does not matter whether the entity or person shows egoism, altruism or other tendencies in arriving at this valuation. Rather, the issue of goods valuation belongs in the realm of other social sciences (e.g., psychology). As we can see, Robbins (2007 [1932]) also adjusts the concept of economic man developed by Smith (1869 [1776]a, 1869 [1776]b) and Edgeworth (1881). For him, economic man is not a 'pleasure machine', but an approximation whose actions are understood as a means to an end instead of an end in itself. In contrast to Smith (1869 [1776]a, 1869 [1776]b), Robbins (2007 [1932]) acknowledges different motivations behind those means. In terms of early critique of economic science, based on from psychologists' views, Robbins' (2007 [1932]) reckoning is notably direct:

The borderlands of Economics are the happy hunting-ground of the charlatan and the quack, and, in these ambiguous regions, in recent years, endless time has been devoted to the acquisition of cheap notoriety by attacks on the alleged

psychological assumption of Economic Science. (pp. 83-84)

Who or what Robbins is referring to specifically can only be surmised, since he refuses to give any names in that part of his book. For Robbins (2007 [1932]), it is not necessary to consider any psychological characteristics of the human being; these characteristics cause only slight variations to outcome, but have no crucial bearing on the theories of relative goods valuation.

2.2. Critical assessment of mainstream economics

These three famous economic scientists haven't all raised issues critical to the neoclassic paradigm. Of course, from the wide range of scholars others could have been named as well, for example John Stuart Mill (1806–1873), David Ricardo (1772–1823), George Joseph Stigler (1911–1991) or Vilfredo Federico Damaso Pareto (1848–1923), but I think, I already made my point with the three scholars given. Methodological and epistemological issues are discussed below, followed by a narrower examination of basic assumptions necessary for constructing mathematical models. Based on these issues, implications for behaviourism and cognitive science are presented, in particular the rationality assumption. This initial analysis reveals a first glimpse of the meaning of social contexts for consumption preferences; that in turn is used as a transition towards institutional economics.

2.2.1. Methodological and epistemological issues

As stated in the first paragraph of section 2.1, it is Nelson (1993) who finds a connection between economics and Cartesian philosophy. She attests that economic science is more of a world view than a discipline defined by its subject. In this world view, which is a theory of choice rather than anything else, human choice can be quantified by mathematical formula. Based on the pioneering works of the three scholars Smith, Edgeworth and Robbins economic science became more mathematised. Nobel Prize winner Debreu (1991) offers an extreme example: He argues that “removing all (...) economic interpretations and letting (...) mathematical infrastructure stand on its own” is the “acid test” (Debreu, 1991, p. 3) for economic science. He shows, in the *American Economic Review*, that the amount of pages referring to mathematical formula increased from 3 percent in 1940 to over 40 percent fifty years later. In addition, the complexity of those formula increased during this time, too (Debreu, 1991).

Krugman (2009a) states that econometric (mathematical) modelling is indeed a useful tool; however it is not proven.

CAPM¹ is a beautiful model; that doesn't mean it's right. The math of real business cycle models is much more elegant than that of New Keynesian models, let alone the kind of models that make room for crises like the one we're in; that makes RBC² models seductive, but it doesn't make them any less silly. (Krugman, 2009a, p. n.a.)

Therefore, maths should be a servant and not a master of economic science, as he concludes. Yet, as Krugman (2009a) explains the advantages of mathematical models itself, he also asserts that we live in the “Dark Ages of macroeconomics” in which “the general understanding that macroeconomics is more than supply and demand plus the quantity equation — somehow got lost in much of the profession” (Krugman, 2009b, p. n.a.). Even Keynes (2008 [1936]) critically assesses the use of mathematics in economics in his *General Theory of Employment, Interest and Money*.

It is a great fault of symbolic pseudo-mathematical methods of formalising a system of economic analysis (...) that they expressly assume strict independence between the factors involved and lose their cogency and authority if this hypothesis is disallowed; whereas, in ordinary discourse, where we are not blindly manipulating and know all the time what we are doing and what the words mean, we can keep ‘at the back of our heads’ the necessary reserves and qualifications and the adjustments which we shall have to make later on, in a way in which we cannot keep complicated partial differentials ‘at the back’ of several pages of algebra which assume they all vanish. Too large a proportion of recent ‘mathematical’ economics are merely concoctions, as imprecise as the initial assumptions they rest on, which allow the author to lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols. (p. 272)

Other critical voices include Boulding (1986), Sen (1977), Ostrom (1990, 1998, 2005), Lawson (1997) and McCloskey (1983, 2008), who show the same intensity in stating their doubts which are as polemic as those views espoused by Krugman (2009b). In particular, Lawson (1997) speaks of “fifty years of econometric failure” (p. 221).

Regarding methodological issues, McCloskey (1983) argues that “in the economic case

1 Capital asset pricing model.

2 Real Business Cycle

the metaphysical position akin to logical positivism is not well argued, probably because its roots lie more in the philosophizing of physicists from Mach to Bridgeman than in the parallel thinking of professional philosophers” (p. 486). Another epistemological example is given by Blaug (1992). He concludes that “economists fail consistently to practice what they preach: their working philosophy of science is aptly characterized as ‘innocuous falsificationism’” (Blaug, 1992, p. xiii).

Nobel Prize winner Douglas North (1993) advocates the theory of economic dynamics as crucial for understanding economic development. In his 1993 Nobel Prize lecture, he explains that “neo-classical theory is simply an inappropriate tool to analyze and prescribe policies that will induce development” (North, 1993, section I, para. 2). He concludes that applied methods are focused on mathematical precision and elegant modelling, and are only concerned with technological development and investment in human capital. Any other institutional changes that might determine economic change over time, even time itself, are simply ignored (North, 1993).

A second critique of the mathematical approach is given by Pluta (2010). Like Nelson (1993), he highlights the hedonistic utilitarianism behind those models which dominate professional economic literature. He speaks of “an embarrassment to the mainstream” due to the lack of “an empirical verified ‘balancing of forces’” in equilibrium models which “assume consumer rationality and maximization of utility” (Pluta, 2010, p. 1155). In contrast, Fehr and Schmidt (1999) show experimentally “that fairness motives affect the behavior of many people” (p. 817), even in situations where such behaviour results in diminishing utility for them. Similar studies have been done by Frey and Oberholzer-Gee (1997) and Frey and Meier (2004). Their objects of investigation were intrinsic and extrinsic motivation as defined by price incentives (Frey & Oberholzer-Gee, 1997) and charitable behaviour of individuals in pro-social environments (Frey & Meier, 2004).

Likewise, Kahneman (2002) examines the cognitive processes in making choices and differentiates between two cognitive pathways which determine intuitive judgement and reasoning. The results of his experiments show that the evaluation of situations depends highly on perceptions and possible conflicts between those two systems. A simple change in the construction of a phrase, without changing the context, can lead to different behaviour. Kahneman (2002) illustrates this, for instance, with the Asian disease problem. The problem states that there is a high mortality rate caused by an unknown Asian disease in the United States and that there are two options with different outcomes. During a trial, one option is changed from “if Program A is adopted, 200 people will be saved” to “if Program A is adopted, 400 people will die,” while the other

option remains “If Program B is adopted, there is a one-third probability that 600 people will be saved and a two-thirds probability that no people will be saved” (Kahneman, 2002, p. 457). The results clearly show that respondents favour result A in the first and result B in the second version, while both options do not implicate any difference in their outcomes. A similar dichotomy is developed by Sunstein and Thaler (2008). On one hand, the automatic cognitive pathway is “rapid and is or feels instinctive, and it does not involve what we usually associate with the word thinking” (Sunstein & Thaler, 2008, p. 19), while on the other hand the reflexive cognitive pathway is associated with conscious cognitive processes. Due to their research of human behaviour, Sunstein and Thaler (2008) also argue for active choice architecture in politics. This means, that the choices of people should be actively influenced by politicians or through campaigns, based on the findings of behaviourist literature.

2.2.2. Issues with basic assumptions and their implications

Furthermore, despite empirical evidence of complex market and price situations, students are still taught single price models determined by autonomous demand and supply. Pluta (2010) and Mirowski (1989), identify the origin of this equilibrium paradigm in the success of Newtonian physics. The elegance of the precise interaction of macro-cosmic objects governed by the law of gravity made leading thinkers of the 18th century assume that all human activity can be described likewise. It was this belief which leads to the 'world view' identified by Nelson (1993), or in Pluta's (2010) words, “if a Supreme Being created a magnificent universe with all its components functioning so efficiently that further intervention was unnecessary, what possible justification could there be for interfering with the natural operation of the economy?” (2010, p. 1157).

There are two implications in that belief. First of all, it is assumed that there are economic laws which can be described like physical laws. This argument was made by famous economist Alfred Marshall (1842–1924) in 1920. His chapter on the generalisation of economics is more or less a comparison between physics and economics, in which he describes a strong similarity between the laws of economics with the laws of the tides, rather than the simplistic law of gravitation itself, and says that “economic laws, or statements of economic tendencies, are those social laws which relate to branches of conduct in which the strength of the motives chiefly concerned can be measured by a money price” (Marshall, 1920, I.III.13). However, Marshall (1920) is not altogether convinced, and defines the imperfection of the equilibrium models as

follows:

The Statical theory of equilibrium is only an introduction to economic studies; and it is barely even an introduction to the study of the progress and development of industries which show a tendency to increasing return. Its limitations are so constantly overlooked, especially by those who approach it from an abstract point of view, that there is a danger in throwing it into definite form at all. But, with this caution, the risk may be taken. (Marshall, 1920, V.XII.17)

The second implication, that economic laws will naturally create economies without the need for governments to intervene, was questioned by Keynes (2008 [1936]), and represents one of the major differences between neoclassical and Keynesian economics today. A very detailed examination of the relationship between economics and physics can also be found in Mirowski (1989). Because of these major differences, that Boulding (1986) was prompted to ask “What went wrong with economics?” (p. 5). He criticises economists who view society as organised only by exchange and not as an entity with an evolutionary nature. He also laments the discipline's separation from political science, as an indicator of the lack of interest in studying market pathologies behind private and governmental activities. He outlines an epistemological problem that is based on false taxonomies and minor related epistemological justifications for methodologies.

Moreover, Boulding (1986) argues that it is doubtful whether mathematical and observational methods, successfully developed for the solar system, are adequate for social and economic systems. The reason for his doubt can be found in the changing parameters of social systems that contrast with stable parameters in the physical world. Boulding (1986) refers to alchemy and the definition of race in biology to illustrate his ontological concerns. Alchemy, an ancient science, has evolved a heterogeneous ontology based on fire, water, air and earth as main elements. Yet, as a tool to understand the complexity of the world, the alchemist's world view has been proven to be incorrect. It is therefore questionable whether the economical equivalents labour, capital and land are sufficient to define the complexity of social systems. In the same way, Boulding (1986) points the unsuitably simple definition of race, given the findings of genetic research. According to this argument, genetic variations are bigger within populations distinguished by race rather than between them.

Second, a complex socio-economic system is at some point irreducible and inherently unpredictable. Thus, economic models are in principle not able to make predictions into

the far future. The fact of uncertainty must lead to this conclusion and therefore Boulding (1986) suggests that inspiration can be found in quantum physics, a discipline which deals with uncertainty well. In summary, Boulding (1986) sees over-simplified economic assumptions, or their interpretation, as a problem. To him, the use of goods and services rather than their consumption determines satisfaction, and while consumption is obviously necessary for use, it is not sufficient for satisfaction. Here, Boulding (1986) ranks consuming equal to purchasing and explains that, for instance, the use of clothes is more satisfactory without continuing purchases.

The concept of utility in economics is also criticised by England (1993) in her critique of unchanging tastes that are exogenous to economic models and the selfish person. Contrary to empirical research, economic science abandons interpersonal utility comparison based on the “separative model of human nature” (England, 1993, p. 37) inherent into neoclassical models. Like Nelson (1993), England (1993) comes from a feminist perspective and defines those three assumptions, i.e. utility, unchanging tastes and the selfish actor, as 'androcentric biased' in order to emphasise the male-centred character of economic theory. Furthermore, in concordance with the bottom line of feminist critique, she also points to the missing acknowledgement of socially-constructed gender roles, even in critical reviews of economics by other scholars (England, 1993). She argues that gender roles lead both to the exclusion of women from activities and institutions considered as male, and contempt towards classical female activities (England, 1993). Based on this, she also points to the separation between male and female emotional relatedness to their professions, men are usually seen as unconnected and non-empathic, while “emotional connections, and the skills and work entailed in honoring connection, are an important part of the activities traditionally assigned to women” (England, 1993, p. 40).

2.2.3. The implications of behaviourism

The impossibility of interpersonal utility comparison is a result of the view that utility, as indicator for any person's advantage, is subjective. However, taking emotional connections into consideration, one might argue that utility facilitates empathy, which as the ability to imagine how someone else feels in given situations. Interestingly, Smith's (1761 [1759]) impartial spectator is also based on empathy, yet the empathic side of the impartial spectator was never properly integrated into the concept of utility in economic theory. England (1993) argues on one hand that the existence of empathy “implies the

possibility of translating between one's own and another person's metric utility" (p. 42), and on the other hand that the negation of interpersonal utility comparison leads automatically to the denial of empathy. Furthermore, this assumption also exposes that any academic interpretations of utility issues in economics must be impossible, which is in conflict to many discussions in research papers. Overall, the paradigm "permits no assessments of in-equal utility that otherwise might serve as grounds for advocating egalitarian redistribution" (England, 1993, p. 43).

The construction of the separated self is the reason for selfishness in markets. It can be questioned from the standpoints of altruism, empathy, and social solidarity (Fehr & Schmidt, 1999; Frank, 2004; Frey & Meier, 2004; Frey & Oberholzer-Gee, 1997; Kahneman, 2002). The controversial Russian philosopher Ayn Rand is particularly noted for her discourse on selfishness (1957; Rand & Branden, 1964), at least in the Anglo-American political world. In *The Virtue of Selfishness* (Rand & Branden, 1964), she argues for an egoistic perspective and condemns altruism as socially destructive. Amongst the politically conservative in the US, the former chairmen of the Federal Reserve, Alan Greenspan is one of her admirers (Rubin, 2007). Rand and Branden (1957; 1964) argue that society will automatically benefit from individuals seeking selfishness and following in the footsteps of early economists. Likewise, economists have started to define the interests of a person "in such a way that no matter what he does he can be seen to be furthering his own interests in every isolated act of choice" (Sen, 1977, p. 322).

England (1993) comes to a similar conclusion and points to 'new home economics' by Becker (1981) as an example of this sort of theory. Becker (1981) draws an image of a self-interested market attendee altruistically representing his family. Thus, the utility function of the family is transformed into the person's own when he moves into the market and acts selfishly. Altruism and selfishness then become indistinguishable. This view, however, is simplistic and poses the question of why a person, whether male or female, is altruistic within the family while there they exhibit no such behaviour in markets. It makes no sense "that the altruist who displays an emotionally connective self in the family is the same person who marches out into the market selfish, unable to empathise with others, with utterly rigid tastes" (England, 1993, p. 48). Furthermore, absolute altruism has to be reconsidered in the light of power imbalances within the family based on patriarchal family models and gender roles. England (1993) points to research which shows that in family models with men in charge, those men are not

entirely altruistic since they combine control, power and resources. The final issue is exogenous and unchanging tastes. England (1993) refers to a paper by Stigler and Becker (1977), who support the purity of the economic assumptions on tastes.

[They] have partly translated 'unstable tastes' into variables in the household production functions for commodities. The great advantage, however, of relying only on changes in the arguments entering household production functions is that all changes in behavior are explained by changes in prices and incomes, precisely the variables that organize and give power to economic analysis. Addiction, advertising, etc. affect not tastes with the endless degrees of freedom they provide, but prices and incomes, and are subject therefore to the constraints imposed by the theorem on negatively inclined demand curves, and other results. (Stigler & Becker, 1977, p. 89)

England (1993) asks whether it is possible that preferences and tastes change through socialisation. She points to the development of children observing others, who then model their own tastes and values accordingly. Likewise, she raises the question in terms of relationships with co-workers or neighbours and its effect on one's preferences. In particular, the latter seems to be highly influential on one's housing preferences. Changing neighbours will therefore redefine the preferences of a house owner, although it might be a minor influence. In this regard, Lee and Keen (2004) conclude that “consequently, an individual consumer outside of a social network wanting y_i as an acultural object for its own sake is simply unintelligible” (p. 175). England (1993) concludes that classic economic assumptions arise from a gender biased science and it is therefore necessary to eliminate them for a progressive development of economic science. In regard to the examined problems, England (1993) suggests the inclusion of methods into the economic inquiry that cover the externalities of preferences, the different concepts of altruistic behaviour in markets and at home. This, would enable economists to achieve wider scope in their work.

2.2.4. The rationality of economic agents

Another assumption, which England (1993) mentions but does not elaborate on due to its loose relation to gender roles, is the rationality. In addition to his selfishness and egoism, economic man is represented by rational choices related to his egoistic character. Yet, this kind of rationality is nothing other than an instrument to provide internal consistency within economic models. This means, that a choice is rational when

it maximises one's utility or can only be explained by welfare maximization (Sen, 1977).

Sen (1977) introduces two separate concepts in order to explain behaviour beyond rationality, sympathy and commitment. By distinguishing between both concepts, it is possible to understand that the outcome of any choice is not only determined by egoism. Sympathy is, according to Sen (1977), more related to egoism than commitment. Imagine a situation in which someone gives money to a beggar in the street. When they act out of sympathy, they are emotionally concerned, or their “sense of well-being is psychologically dependent on someone else's welfare” (Sen, 1977, p. 32), a form of an egoistic philanthropy. On the other hand, a behaviour based on commitment can be identified when there is no emotional connection at all; however, the person thinks this kind of poverty is wrong and wants to do something. In this case, one's personal well-being does not change, but the beggar is better off.

In a more telling example of this concept, commitment lets someone choose an action which degrades their well-being. “Commitment then involves choosing an action that yields a lower expected welfare than an alternative available action” (Sen, 1977, pp. 32-33). An extremely negative example of commitment-based behaviour is the prisoner abuse scandals perpetrated by US soldiers in the Iraqi prison Abu Ghraib (Arango, 2011). According to the testimony of the defendant soldier, he followed orders and thus showed a commitment to his duty (Suarez, 2004). It is obvious that those actions were diminishing his personal and the victim's well-being, although it might be questionable whether the defendant soldier was aware of his loss. However, Sen (1977) believes that there is a positive connection between commitment and morality. One's morality, based on any system of belief, can clearly induce choices that show the effects of behaviour based on commitment.

Other areas important to economic science are also influenced by the concept of commitment, such as job motivation or incentive strategies. A sole focus on personal gain from incentives is unlikely to successfully explain organisational structures. Enjoyment of altruism or a sense of solidarity, are also factors influencing organisational structure. Hirschman (1970) examines this concept in detail. He states that organisations, whether they are companies or other social entities, must manage levels of commitment, or loyalty of their staff or members. According to Fehr and Schmidt (1999), Frey and Oberholzer-Gee (1997) and Frey and Meier (2004), individuals can either exit the organisation or raise their voice in order to force change if

they feel disadvantaged. Hirschman (1970) illustrates that the complex relationship between exit and voice in regard to loyalty or commitment levels, is complex. The contrasting view is that “the purely economic man is indeed close to being a social moron” (Sen, 1977, p. 37). Steele (2004) adds that mainstream economics is too much focused on economic man, and disregards human values. Values, defined as meta-preferences, have an undeniable influence on consumption preferences, and induce social behaviour. Finally, Sen (1977) discusses meta-rankings as a technique used by humans to choose behaviours or preferences. In terms of the latter, the choice is not only about what preferences one has, but also which preferences one prefers to have, or what conflicts can be identified between preferences. This leads to a more structured and sophisticated way of analysing human priorities. For example, imagine a person who likes both salad and steak, but wishes he or she would like salad more and steak less, due to animal rights concerns. Herewith, the moral judgement represents a meta-ranking of preferences. Combining the separation of sympathy and commitment with meta-ranking, Sen (1977) argues that the acknowledgement of these concepts will enrich economic models.

A different conceptual discussion on economic rationality is presented by the French-Austrian sociologist and philosopher André Gorz (1994). He describes economic rationality, otherwise known as calculative calculus applicable only in exchange and not in self-supply situations. In self-supply situations, agents will consider different variables such as “the level of need satisfaction and the additional effort required to raise this level as well as the amenity of the gain of time and the discomfort of the necessary work intensification” (Gorz, 1994, p. 236). Moreover, the outcomes of self-supply have, by definition, no exchange value and thus cannot be correlated with economic rationality. Furthermore, actions based on economic rationality require the existence of a free market. Gorz (1994), however, questions the existence of a free market defined by isolated producers and consumers. Any act of communication between similar agents, and any kind of cooperation, implies the existence of different levels of needs that are contrary to the concept of economic rationality. As Gorz (1994) states, “the limited nature of needs prevents economic rationalization.” (1994, p. 238).

Yet, the limited nature of needs is determined by cultural consensus. This concept is explored by Gorz (1994), in the discussion of societies’ understanding of what is enough. According to him, the term enough reflects a boundary for concrete desirable needs that are worth working for. According to the definition of economic rationality,

therefore, it is irrelevant to calculate the work input beyond what is socially or culturally accepted. In summary, “the economic rationality does not apply if the individual is free to determine his levels of needs and work efforts” (Gorz, 1994, p. 238). However, the term enough has a cultural rather than an economic origin, and is, according to Gorz (1994), responsible for conflicts. Simon (1956) gives a specific example of this conflict: interest rates in medieval times were economically preferred but culturally, in this case religiously, banned. Such a culturally-based banishment of interest rates remains observable in Islamic countries today (Reidegeld, 2005). In contrast, Friedman (1953) refers to a hypothetical rationality paradigm, and claims that it is indeed sufficient for theorizing and market evaluations. In his defence of the substantial rationality hypothesis he says it only shows “that under a wide range of circumstances individual firms behave *as if* they were seeking rationality to maximize their expected returns (...) and had full knowledge of the data needed to succeed in this attempt” (M. Friedman, 1953, p. 21).

However, Simon (1956) and Gorz (1994) notice that humans lack the cognitive capacities for maximisation. Unawareness of relevant probabilities, insufficient precision in evaluating risks and the limited and unreliable capacity of our memory regarding all possible outcomes, leads to a more realistic approach towards rationality. Thus, the act of choice as Simon (1956) defines it, is an act where the person finds an adequate, but not an optimal solution.

2.2.5. Cognitive concepts versus economic man

The image of economic man is further criticised by Simon (as cited in Wolozin, 2002).

The dream of thinking out everything before we act, of making certain we have all the facts and know all the consequences, is a sick Hamlet’s dream. It is the dream of someone with no appreciation of the seamless web of causation, the limits of human thinking, or the scarcity of human attention. (p. 46)

Wolozin (2002) uses this quote to introduce his main concern about the absence of modern psychology’s sophisticated insights from mainstream economic theory. He highlights the importance of a differentiation between conscious and unconscious decisions in economic behavioural models. He mainly supports Leslie Farber's concept of the two realms of will. Farber (2000 [1966]) defines will as “the mover of actions both trivial and important” (p. 76). This distinction between the conscious and unconscious realm of the will becomes clear if we remember the process of learning

how to drive, when we soon realised that the fluid manoeuvring of our vehicles did not depend on much conscious thinking. When we are thinking about driving, we are not fully aware of thinking. Farber (2000 [1966]) writes that “we are, so to speak, of a piece – mind and body seamlessly and unselfconsciously joined in a totality. Will is so wedded to our faculties, our perceptions, our motor possibilities that it may be said to be unconscious in this first realm” (p. 77). The second realm, the conscious one, comes into account when, for instance, we actively adjust our motor coordination in order to change possible flaws in our driving. Farber’s (2000 [1966]) ideas are similar to Kahneman’s (2002) and Frankfurt’s (1971) dualistic cognitive concepts, which have been mentioned earlier. These concepts are also expressed in the philosophies of American Pragmatism. American Pragmatism’s best-known representatives are William James (1842–1910), John Dewey (1859–1952), Charles Sanders Peirce (1839–1914) and George Herbert Mead (1863–1931) (W. D. Smith, 2009). Interestingly, Farber (2000 [1966]) does not directly refer to those scholars.

In reference to Mitchell and Black’s (1995) analysis on psychoanalysis, Wolozin (2002) illustrates the meaning of psychological complexity in contrast to hedonistic- and utilitarian-based decisions. In fact Mitchell and Black’s (1995) summary is simple, understandable, and elegant: “the real meaning of much of what we think, feel, do is determined unconsciously, outside our awareness. (...) The apparent transparency of mind is an illusion; the psyche and the personality are highly complex, intricately textured layers of instinctual impulses” (p. 16). At this point, I want to notice that I will not deal with the internal psychological processes of the human consciousness in detail. Due to its complexity it is a separate topic in itself. If necessary, I will refer to Kahneman’s (2002) and Frankfurt’s (1971) cognitive models for those internal processes.

Hodgson’s (2007) approach towards complexity of human conscience is built upon two perspectives. He describes the first as a dependence of “human cognition (...) on its social and material environment and the cues provided by structured interactions with individuals and artefacts” (Hodgson, 2007, p. 329). The second perspective is the fact that those necessary categories and rules, which are used to understand sensory input, are learned and created in a social environment. The first perspective has not only a psychological but also a long philosophical history, and became a leading idea pitting realism, empiricism, and rationalism against scepticism, idealism and constructivism on. The core of this 'dispute' is the question of whether cognition is based on reality or

reality is formed through cognition (Audi, 2011). However, Hodgson (2007) refers to Maes et al (1993), who show that research in artificial intelligence ends up in minor results when autonomous agents are assumed to be endowed with deliberative thinking. The latter point suggests that human cognition is highly influenced by the social environment of the individual. Those influences are discussed and interpreted by Hutchins (1995), who argues that cultural and social systems have cognitive properties that are distinguishable from cognitive properties of individuals. Here, cognition is understood as the process of information processing, and can be identified beyond the individual. The cognitive processes of problem solving are achieved through the combined interaction of several members of a group (Hutchins, 1995). Likewise, Lave and Wenger (1991) emphasise learning in a social context rather than as an individual process because “learning as internalization is too easily construed as an unproblematic process of absorbing the given, as a matter of transmission and assimilation” (p. 47). This is known as situated learning and the focus of this learning is the development of cognitive identity structures and the negotiation of meanings or contexts in specific situations, rather than the simple transfer of knowledge from one human to another. At the end, Lave and Wenger (1991) even assume the impossibility of this transfer between individuals.

In contrast, Lorenz (2001) criticises Lave and Wenger's (1991) situated learning due to its focus on external contexts and the resulting attachment of problem solving concepts to particular activities in time and space. In this situated learning model, a generalisation of knowledge, which crosses local and time-limited contexts, is impossible. Lorenz (2001) therefore supports Hutchins' (1995) approach and concludes that “problem-solving activities of organisational members are embedded in a wider historical and cultural context stretching across particular times and places” (Lorenz, 2001, p. 308). Furthermore, Lorenz (2001) argues for the acknowledgement of a bilateral cognition represented by external and internal processes. Here, the “external mediating devices” are “tools, equipment and plant layouts” but also “standard operating procedures” while “internal cognitive artefacts” are “internalised representations of these texts in the minds of the organisation’s members” (Lorenz, 2001, p. 322).

2.2.6. Consequences of cognitive and psychological models

Hodgson (2007) highlights the importance of recognising social contextualisation of knowledge, particular consumption preferences and decision making. Thus, the

assumption of individual, independent, rational choices is rather untenable (Kahneman, 1994). Kahneman (1994) points to human qualities that disagree with the concept of rationality, such as the inability to predict one's future preferences, and near-sighted decision making. In summary, it is necessary to acknowledge and examine internal cognitive processes, and the social and cultural contexts, in order to achieve a valuable expansion of economic theory. Hodgson (2007) demands a “development of an evolutionary concept of human agency, based on habit and instinct (...) the development of a multi-level theory of socio-economic evolution [and] the development of a new formulation of the micro-macro relationship, involving interaction between heterogeneous agents” (pp. 336-337).

2.3. Institutional economics – an alternative approach

“Science itself is a manifestation of social evolution” is the final conclusion by Steele (2004, p. 1051) in his pursuit of understanding economic man. His idea is that society evolves over time and that social orders are changing through the advent of cultural norms based on human behaviour. Thus, economic activity is nothing more than specific human behaviour, a complex mixture of ethics, rules, standards, emotions and everything else that characterises the individual and the groups the individual belongs to. It was Thorstein Veblen (1857–1929), regarded as a founding figure in the development of evolutionary and institutional economics, who, in 1898, first understood the need for economists to have a broader perspective. He states that “all economic change is a change in the economic community,—a change in the community's methods of turning material things to account. The change is always in the last resort a change in habits of thought” (Veblen, 1998 [1898], p. 412). This means that evolutionary and institutional economics is based on the concept that the origin of economic activity is in the change in the 'habits of thought' rather than in the scarcity of resources and given ends as proposed by mainstream economics (Stoelhorst, 2008; Veblen, 1998 [1898]). Veblen (1998 [1898]) sees the human actor as driven by different interests in each situation they face, and that economic interest is but one of many interests. Furthermore, these interests are subject to cumulative growth or change throughout people's lifetimes. Thus, “evolutionary economics must be the theory of a process of cultural growth as determined by the economic interest, a theory of a cumulative sequence of economic institutions stated in terms of the process itself” (Veblen, 1998 [1898], p. 413) in order to transform economics into a 'modern science' characterised by Darwinian attributes

(Stoelhorst, 2008)., Veblen (1998 [1898]) argues that the advantages of the proposed methodology, the creation of knowledge by gathering facts and being aware of one's own 'habits of thought', may be necessary for a more realistic scientific development of economics and formulation of coherent normative knowledge for the discipline.

As we can see, Veblen's (1998 [1898]) observations are similar to points formulated by the scholars mentioned before. Although formulated early in the history of institutional economics, Veblen's (1998 [1898]) concept has never been very successful in competition with neoclassical economics. The reason identified by Etzioni (2011), that institutional economists have never proposed an alternative paradigm. According to him, this is why the neoclassical paradigm is still dominant in economic science. Furthermore, as in any other science, economists try to eliminate contradicting facts towards the mainstream paradigm by, for instance, minimising the importance of those facts, reinterpreting them to make them fit, and giving as few concessions as possible. Alternatively, economists declare them exogenous since the neoclassical “paradigm contains the accumulated results of decades if not generations of efforts by many thousands of scholars, a codification and distillation of their findings, observations, and insights” (Etzioni, 2011, p. 1108). This makes it even harder for evolutionary and institutional economists to successfully criticise the mainstream theories and initiate change.

2.3.1. A short history on institutional economics

Institutionalism in economics, like every other school of thought, can be best understood against the background of its history. Thus, the following sub-chapters will present an overview on the history of institutional economics the most influential contributors to the field of study, as well as the impact of their works in the light of economics science's major paradigms.

2.3.1.1. Pre-World War II institutionalism

Institutional economics has always been a mixture of different schools of thought contrary to the more homogeneous mainstream economics. These schools of thought are differing in their definition of institutions. Beside Thorstein Veblen, Wesley Claire Mitchell (1874–1948), John Roger Commons (1862–1945) and Clarence Edwin Ayres (1891–1972) are credited for their contributions towards the development of institutional economics or old institutional economics (Potts, 2007). While Thorstein

Veblen can be seen as intellectual inspiration, Wesley Mitchell formed Veblen's legacy into an academic movement (Rutherford, 2001). It was Mitchell (1910) who outlined a more detailed, psychology-based critique of economic theory, inspired by William McDougall's *An Introduction to Social Psychology* (2003 [1908]). Mitchell (1910) also explained the 'money market' as an institution defined through market transactions, price systems, and banking institutions. He abandoned his pursuit in the following years, however, due to his concerns about the speculative nature of his thoughts (Rutherford, 2001).

Another noteworthy essay addressing the psychological elements in economics science is *Economics and Modern Psychology II* by Clark (1918), a colleague of Wesley Mitchell. Clark (1918) examines free economic choices which he sees as “suggestive rather than complete” but “the carrying out of such studies is not to be accomplished by the methods of old-time 'general theory'” (p. 166). Later, Commons (1931) dedicated an article to institutional economics in the *American Economic Review* and defines institutions “as collective action in control, liberation and expansion of individual action” (p. 651). Finally, Ayres (1978 [1944]) developed analytical tools to understand the interaction of different institutions, such as ceremonial and instrumental institutions (Potts, 2007). In summary, the early institutionalists' methodological understanding relied on empirical evidence that “was not limited to quantitative and statistical methods, but could include case studies, documentary evidence, and the study of judicial opinions and court decisions” (Rutherford, 2001, pp. 177-178).

2.3.1.2. Post World War II institutionalism

Although it reached its zenith after World War I, between 1918 and 1935, the popularity of institutional economics declined after World War II, in 1945, and was replaced by neoclassical and Keynesian economics, at least in the Anglo-American world (Hodgson, 2007; Rutherford, 2001). In Europe, the Austrian School, initiated by Carl Menger (1840–1921) and represented by scholars like Eugen Boehm von Bawerk (1851–1914), Ludwig von Mises (1881–1973) and Friedrich von Hayek (1899–1992), remained in opposition to neoclassical and Keynesian economics even after World War II, by acknowledging evolving institutions and considering their importance to economies (Cubeddu, 2005). Hayek (1988), for example, is still well-renowned for his concept of spontaneous order, both in terms of the market and in any other social context. He asserts that the origin of social order evolves from individual aims influenced by limited

choices. This spontaneous order, or self-organising phenomenon, is therefore more applicable for transmission of context-related information than is conscious design (Boykin, 2010).

Institutional economics became insignificant after 1945 because of various reasons. One, mentioned above is the absence of a satisfying alternative paradigm (Etzioni, 2011). Another reason was the simultaneous rise of the more 'interesting' Keynesian school of thought, coupled with the already well-established and continually developing neoclassic economics (Rutherford, 2001). Rutherford (2001) describes the two reasons in more detail: the paradigm change in psychology away from habits and instincts in the mid 1920's, and in addition, the failure of institutionalists to define which modern psychology approaches they used. Finally, the separation of sociology and economics rendered the outcome inevitable, because sociology was “taking much of the subject matter of social norms and institutions with it” (Rutherford, 2001, p. 183). Furthermore, social scientists developed their own brand of institutionalism as for instance Berger and Luckmann (1966), to whom I will refer to in the next chapter.

2.3.1.3. A revival of institutionalism

Fortuitously, institutional and evolutionary economics never fully disappeared due mainly to the work of Ayres (1978 [1944]) and Galbraith (1998 [1958]). They established a rival philosophy to mainstream economics in the US in the early 1970's (Hodgson, 2007). Anyway, the discipline also experienced a separation between old institutionalism and new institutionalism. While the former is founded on the work of Thorstein Veblen, Wesley Claire Mitchell, John Roger Commons and Clarence Edwin Ayres, the latter is attributed to Ronald Coase, Oliver Williamson, and Douglass North (Rutherford, 2001). The differences are complex. Potts (2007) defines them by analysing institutions. In old institutional economics (OIE) an institution is both “a process-structure of correlated behaviours” and “a social coordinating mechanism” (Potts, 2007, p. 343). In contrast, in new institutional economics (NIE) transactions between groups or individuals, and the search for the most efficient outcomes from those transactions, are important. Potts (2007) explains that “the crucial difference between the OIE and NIE therefore resides in their analytic foundations in terms of an open system analysis of an historical process and a closed-system analysis of equilibrium outcomes, respectively” (p. 343). In contrast, Hodgson (1998a) summarises the new institutionalist's approach as an “explanatory movement (...) from individuals

to institutions, taking individuals as given” (p. 176). This, he says, comes from a 300-years-old tradition of individualism originating from the 18th Century Enlightenment. In contrast, the old institutionalists do not take individuals as given, but rather see them as both a producer and a product of social interactions. Rutherford (2001) explains the differences between OIE and NIE in an attempt to broaden neoclassical theory and debate formerly ignored factors, such as property rights and governance laws. Additionally, OIE tried to completely replace neoclassical theory. However, just as Hodgson (1998a), Rutherford (2001) identifies “major differences in methodology, in the theoretical and analytical tools being used, as well as in the basic orientation towards the market and 'business' institutions” (p. 187) between both schools of thought. The existing variety of definitions of institutions is criticised by Pluta (2010), who says this is not beneficial for an unified conceptual framework.

2.3.2. What is an institution?

What both OIE and NIE have in common is the concept of institutions. Early definitions are given by Veblen (1998 [1898]), who understands institutions as “habits of thought” (p. 412), and Commons (1931), who believes “actions of control” (p. 651) are central characteristics of institutions. Potts (2007) scrutinises institutions and finds four major characteristics. First, institutions are both artificial because they are made by human interaction, and also natural, because they self-organise. Second, they are individual due to human interaction, but also social due to coordination of transactions between groups of individuals. Third, they are processes in historical context, because their structure acts to coordinate systems. Fourth, institutions create the economy and establish its rules. In summary, “institutions are coordinating mechanisms between the individual and social process of the creation of economic value” (Potts, 2007, p. 342). Hodgson (2006) carefully “define[s] institutions as durable systems of established and embedded social rules that structure social interactions, rather than rules as such. In short, institutions are social rule-systems, not simply rules” (p. 13).

Hodgson (2006) sees a danger in over-generalisation and excessive use of self-organisation. In defining institutions, he recommends caution. He describes the understanding of institutions and behaviour as equal, which “would mislead us into presuming that institutions no longer existed if their associated behaviors were interrupted.” (Hodgson, 2006, p. 3). His rhetorical metaphor is that the British monarchy does not cease to exist when the Royals are sleeping and thus it makes no

sense to limit institutions to bare behaviour.

Further critical evaluation of existing definitions is given by Lawson (2003). His paper describes a widespread, sharply-drawn dichotomy between institutions and technology in the North American institutionalism. This dichotomy arises from the understanding that “social life (...) is decomposable into technology and the ceremonial features of life” where “the former serves as a continuous internal impulse to change; the latter acts merely to constrain, to render everything static: without technology there would be no change” (Lawson, 2003, p. 176). Hamilton (2008 [1951]) agrees: “culture is made up of dynamic and static elements that appear 'in some sort of symbiosis.' Veblen and other institutional economists call the static element institutions; the dynamic element is called technology.” (p. 84).

Lawson (2003) cites political movements and the slow but continuous development of languages as the origins of non-technological institutional change. He does not deny that this dichotomy provides valuable insights, but asks for it to remain adjustable. To him, the loosening of the dichotomy allows critical thinkers to raise important questions about whether technology is always a stimulus for change, under what conditions technology induces change, and if “technology can reasonably be distinguished from social structure and even from institutions” (Lawson, 2003, p. 200).

Neale (1987) also deals with the concepts of behaviour in terms of institutions. He specifies three major characteristics that identify institutions. The first is the cryptic concept of people doing, defined as the need for people to act in the first instance. The ‘people doing’ concept is comparable with the concepts of pragmatism (Mead, 1934; W. D. Smith, 2009). The second characteristic is comprised of rules that govern actions in terms of repeatability, stability and predictability, and finally the folkviews which are explaining and justifying the actions and rules on a meta-level. However, institutions do not dictate actions directly, but they do define determining frameworks. For example, “a culture is collective action, a collective legacy of patterns of action, just like a language which allows freedom of thought but no grammatical expression” (Neale, 1987, p. 1179). Therefore, institutions provide a limitation of acceptable choices (Neale, 1987). Nonetheless, determining frameworks such as grammar also underlie conscious and unconscious changes over time.

Neale (1987) tries to solve a misunderstanding of institutions in economics. Classical economic theory, is what he calls economising, the study of the logic behind maximisation based on “least effort, least costs, most output” (Neale, 1987, p. 1180). On

the other hand, institutionalism's subject is really the study of economies, the way people choose ways to achieve goals on an individual.

Another important point is the relationship between different institutions due to their classification. Neale (1987) sees relative freedom in the investigation of institutions; a scholar may examine an institution based on interest. For example, a complete banking system or a small enterprise can be defined as an institution, depending on the topic of inquiry. Furthermore, the analysis of institutions on different levels is established as a result of this diversity. It is possible to explain how banking systems interact with markets, because both are institutions. If not properly distinguished, however, such a multiplicity of institutions can create confusion.

Dolfsma (2004) bases his study of the origin of institutions on the discourses of Neale (1987). He uses socio-cultural values as settings for institutions, or what he calls the "social value nexus" (Dolfsma, 2004, p. 48). Such values are represented by the expressions of justice, beauty, and freedom. Economic "behaviour and valuation need to be understood as institutionalized expression of underlying socio-cultural values" (Dolfsma, 2004, pp. 48-49). He distinguishes between two types of values, or valuation. Socio-cultural values, the first type, are underlying social convictions, such as ethics; the second type of value is defined as the importance of specific goods and services, plus non-physical things such as friendships. Institutional settings can be found amongst these contrasting values, or valuations. In fact, those settings are actually what determine human behaviour. However, Dolfsma (2004) emphasises that his social value nexus is non-deterministic, and that changes in every stage can influence and change other stages. A particular driver for change is a tension in one of those three stages, socio-cultural values, institutional settings and values. As for instance, tension between an institutional setting and underlying socio-cultural values can arise from a growing separation of the two, and thus the institution will change. Obviously, changes in all three stages are less likely, and institutions will change faster than social convictions.

The final example of a behaviour-based definition of institutions is based on the works of Stoelhorst (2008). He contrasts Veblen's (1998 [1898]) description of bottom-up economic development, based on cumulative causality of individual behaviour, with Nelson and Winter's (1982) explanation of economic development through selection of firms or institutions, a process starting in the middle rather than at the bottom. Nelson and Winter (1982) introduce the concept of routines which cover "well-specified technical routines for producing things, through procedures for hiring and firing,

ordering new inventory, (...) and business strategies about product diversification and overseas investment” (p. 14). They believe these routines are essential in defining firm behaviour, and do not originate on only an individual level. Stoelhorst (2008) argues that it is crucial to understand the relationship between input on the individual level and the output on the community level. He describes institutions “as emergent properties that find their origin in the interaction amongst individuals” (Stoelhorst, 2008, p. 420). He also states that institutions are a stabilising channel for coordination and competition within groups, allowing the group to successfully take part in inter-collective competitions.

2.4. Towards consumption preferences

Following the general points of critique of mainstream economics and the alternative approaches of institutionalists, I want to contextualise my thesis topic into the institutional economic discussions and outline a methodological justification before I will present my theoretical synthesis in the next chapter.

In this section, I discuss theoretical socio-cultural implications, which is followed by remarks on communicational literature. I will justify the importance of communication theories including references to insights presented earlier.

2.4.1. The social origin of consumption preferences

As discussed, recent research in disciplines other than economic science clearly shows that humans are not consistently rational. Instead, they are irrational and deeply affected by emotions and social-cultural norms (Etzioni, 2011). The implication for an institutional and evolutionary approach to economics is, inter alia, the recognition of a more 'complex' human being than in neoclassical economics. To understand human complexities, it is necessary to analyse behaviour based on commitment, sympathy (Sen, 1977), altruism, empathy and social solidarity (England, 1993). Thus, it is necessary to allocate consumption preferences according to a behaviouristic understanding of the human being. Hodgson (2007) points to the advent and recognition of endogenous preferences, bounded rationality, originally defined by Simon (1957), and program-caused behaviour within the institutional framework with respect to findings of other scholars (Hutchins, 1995; Kahneman, 1994; Maes et al., 1993) in this context. With reference to Joseph Schumpeter's work on individuals as entrepreneurs, Wunder (2007) suggests that preferences are a “result of internalized external ideas” (p.

836) of individuals who belong to a social group. This allows not only for an explanation of how institutions, also defined as social groups, form preferences through transmission of ideas between group members, but also for an explanation of how institutions evolve through path- and context-dependency (Hodgson, 2007; R. R. Nelson & Consoli, 2010). Furthermore, the just mentioned routines by Nelson and Winter (1982) show a similar predictive power of institutional change. Kesting (2010a) concludes from Kenneth E. Boulding's overall critique of Paretian economic welfare theory that preferences by economic agents are determined reciprocally. Consumption preferences, in fact, are the most important influencing variable determining social and economic welfare. Considering welfare as social images in reference Boulding (1956), Kesting (2010a) further writes that:

These images may differ from individual to individual and amongst different interest groups and ideologies. They are, however, also connected via integrative power which is based on emotional bonds and communication. Via integrative power, networks and inter-subjective public images of welfare are formed and changed. (p. 976)

Another similar perspective is mooted by Galbraith (2004), who argues that individual consumption preferences are formed by the power of firms and other institutions. Galbraith (2004) criticises the assumption that consumers make independent choices. Power, in this context, is the “power of persuasion,” which “is based on behavioural assumptions of social embeddedness” (Kesting, 2010b, p. 185). Dunn and Pressman (2005) identify two aspects of Galbraith's concept of power. First, the passive aspect “whereby social norms and localized culture comparison induce consumption patterns” and second the active aspect that results in “the creation and reproduction of a consumer culture” (Dunn & Pressmann, 2005, p. 174). However, Galbraith's thesis is far-reaching and not limited to consumption patterns. Kesting (2010b) sees Galbraith as a radical economist, because his views are diametrically opposite to the mainstream. Kesting (2010b) writes, “we are faced with producer dominated manipulation and interdependent preferences” (p. 190), and market analyses based on power inequality between different-sized cooperations that goes far beyond neoclassical market competition (Dunn & Pressmann, 2005).

2.4.2. Society and culture

As mentioned by Dunn and Pressmann (2005), it is important to recognise the existence

of a consumer culture rather than to assume simple subjective consumption preferences. In his book *Institutional Economics and the Formation of Preferences*, Dolfsma (2004) demonstrates how consumer preferences work by presenting a case study of pop music's beginnings in the Netherlands during the 1960's and 1970's. He describes how a dramatic alteration in preferences can only be explained through changes in his social value nexus. He describes a socially-constructed value of pop music that is not only a matter of subjective sensation. Further, he discovers socially dynamic issues behind pop music values, such as the young rebelling against the old. Dolfsma (2004) also refers to a study by Friedman (1990) to emphasize his point. According to Friedman (1990), who examined the *La Sape* movement in the Congo, consumption is “more than simply material aspects of subsistence (...) [it] can be understood as constituent of selfhood, of social identity” (p. 327). The *La Sape* movement is mostly represented by the “lumpenproletariat” (J. Friedman, 1990, p. 314) and the ethnic group of the Bakongo, who consider themselves to be the most civilised in this region. They are identified by a specific style of extravagant clothing, as shown Figure 1:



Figure 1: Member of the La Sape movement with typical dress code in the Congo. (La Sape [Photograph], 2009)

As illustrated, their lifestyle influences their consumption preferences not only in terms of clothing (Figure 1) but also in terms of their daily behaviour, and food consumption (J. Friedman, 1990). Thus, as Dolfsma (2004) concludes, consumption patterns must be “understood as a means of expression and communication” (p. 38). Furthermore, he says that those consumption patterns remain authentic and cannot be declared as rational or irrational compared with other consumption preferences in other cultures. However, it is important to understand cultural differences in order to understand consumption behaviour. In addition, Denzau and North (1994) emphasise the importance of mental

models, or methods people use to make sense of the social and physical environment they live in. The complexity inherent in mental models provides insights for economic scientists; “the way by which ideas evolve and are communicated is the key to developing useful theory” (Denzau & North, 1994, p. 27).

2.4.3. Communicational Acts

The discussion on consumption preferences presented above, serves as starting point for exploration of communicational acts. It exists a wide variety of approaches, from Galbraith's (1998 [1958], 2004) concepts of power imbalances, over the socially constructed value systems (Dolfsma, 2004; J. Friedman, 1990) to the complex examination of the human cognitive processes and related behaviour by Farber (2000 [1966]), Frankfurt (1971) and Kahneman (1994, 2002), also supported by experimental research by Fehr and Schmidt (1999), Frey and Meyer (2004), Frey and Oberholzer-Gee (1997) and others. Furthermore, the conceptual works of Veblen (1998 [1898]), North (1993), Commons (1931) and others take perspectives on the formation of institutions through human interaction and its importance for economic science.

Traditionally, human communication has not been a subject of particular interest. However, communication is an omnipresent characteristic of our species, and it must be addressed more seriously. An early model of communication was developed by Shannon (1948), and is today known as the Shannon Weaver model. This linear mathematical model offers a solution, via complete induction, for communication containing an infinite number of messages. However, Shannon (1948) intentionally ignores the semantic aspects of communication. In his model, the meaning of the messages, or the content, is trivial and replaceable, while process itself is more important (Figure 2).

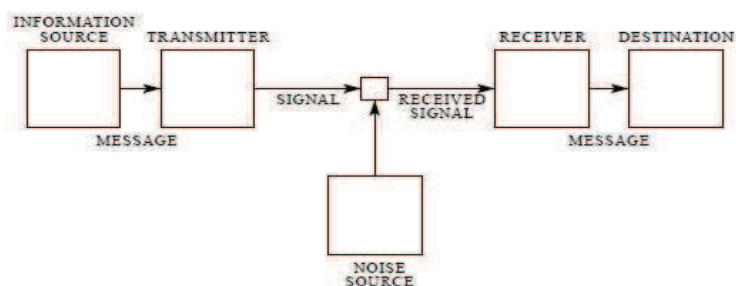


Figure 2: Linear schematic diagram of the Shannon Weaver communication model (1948, p. 2)

Paul Watzlawick, in cooperation with Beavin and Jackson, (1967) note that 'one cannot not communicate' and developed a further model of communication. Their simple

assumption is that each behavioural act is also an act of communication. Even non-behaviour, for instance a non-reaction to a direct form of address by someone else, is a communicational act itself, which makes the idea of an existing antagonism obsolete. Furthermore, all kinds of communication include more than simple meanings, because communication is about creating a relationship between the communicators, based on both digital and analogue modalities. Digital modalities use words, both in their meanings and relationship. Analogue modalities contain the non-verbal parts of communication, such as mime and gesture. Communication is circular between communicators, which means that every act of behaviour is a reaction to another behaviour (Watzlawick et al., 1967). These dynamics are also important for the mental models described by Denzau and North (1994). Their formation and evolution can only occur by transmission through communicative acts. Thus, human interaction, whether it is just in a bilateral or in a group related context, relies explicitly on communication itself, and accordingly, so does consumption.

2.4.3.1. Why is communication important?

As already discussed, it is insufficient to assume that human interactions, as described in mainstream economic theory, are based solely on rationality and hedonistic utilitarianism (Boulding, 1986; McCloskey, 1983). Instead, human behaviour is a consequence of emotions and culture as argued by England (1993), Sen (1977), Wolozin (2002) and Hodgson (2007) and others. It is necessary to distinguish between two levels of human interaction. First, cognitive processes occur as part of “the seamless web of causation, the limits of human thinking, or the scarcity of human attention” (Simon as cited in Wolozin, 2002, p. 46). However, the discussion of such processes would require a deeper examination of recent research literature in psychology and neuroscience and thus, as mentioned, they will not be the focus of this thesis, they are generally assumed to be existent, complex and imperfect in nature. Instead, I will refer to the concepts of Kahneman (2002), Farber (2000 [1966]) and Frankfurt (1971) which will serve as a foundation for this thesis.

Human interaction at a second level is about social interactions. As concluded by Dolfsma (2004), consumption patterns have to be understood in terms of the way they are communicated. Watzlawick, Beaver and Jackson (1967) state that communicational acts are not limited to the simple exchange of information; they also operate at the relationship level, and contain analogue and digital modalities. Such relationships and

modalities are emotionally, socially, culturally, linguistically and ideologically charged, and their idiosyncrasies are framed by those institutions individuals belong to and with which they identify. For example, Farrell (1993, 1995) discusses whether cheap talk really is cheap at all. Cheap talk is a concept of game theory and identifies communicational acts without the transmission of costs for the attending agents; this means it has no effect on the payoffs of any game. Yet, it is questionable whether such communication does exist considering responses of non-rational agents. Sometimes, however, “cheap talk can (...) convey information and affect real (payoff-relevant) action” (Farrell, 1995, p. 186).

2.4.3.2. The logic behind communicational acts and preferences

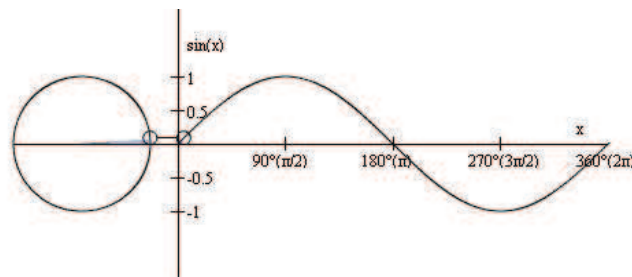
It appears as if there is circularity in which institutions define human interaction, and vice versa. Indeed, as soon as we accept that the human being is a social being, we have to accept such circularities. This line of thought could be as a tautology or *circulus vitiosus*. However, this objection can be addressed through further exploration of the topic. First, we have seen that institutions charge acts of behaviour emotionally and ideologically. Thus, institutions are not single premises themselves but can be understood as a multitude of premises, which are neither homogeneous nor singular in their action. Emotions (e), society (s), culture (c), language (l) and ideology (i) all induce behavioural acts (b). Thus, $e \rightarrow b$, $s \rightarrow b$, $c \rightarrow b$, $l \rightarrow b$ and $i \rightarrow b$ as well as $0 \rightarrow b$, with 0 defined as the reminder of influences, for example behaviour based on instincts. In this equation, it is evident that all propositions are in fact necessary, but they are not sufficient conditions for human behaviour, and it is vital to understand the relationships between them. By doing so, we can easily define different variations such as $e \rightarrow b \rightarrow s$ or $c \rightarrow s \rightarrow b$. These variations solve the problem of a circular argument, or tautology, due to the absence of being sufficient conditions that are, by definition, required in circular arguments. This argument was also successfully applied by Myrdal (2009 [1944]) in his extensive social study *An American Dilemma*. This study describes white Americans' prejudice towards the black American population. He defines such prejudice as a cumulative circular causation for social phenomena, and emphasises their interrelations.

Besides “relative absense of race prejudice on the side of whites,” we introduce a number of variables: levels of “Negro employment,” “wages,” “housing,” “nutrition,” “clothing,” “health,” “education,” “stability in family relations,” “manners,” “cleanliness,” “orderliness,” “trustworthiness,” “law

observance,” “loyalty to society at large,” “absence of criminality” and so on.
(Myrdal, 2009 [1944], p. 1066)

All these variables are interrelated and have a cumulative effect. This implies that a change in one of them may result in a positive or negative change in one or more other variables. Furthermore, for the purpose of this thesis it should be allowed to treat at least some of the premises as self-evident and true to avoid an infinite chain of proofs, as Aristotle proposed (Gensler, 2010). I will explain the self-evidence of my premises in the next chapter in detail.

The second argument deals with the perception of non-static determination. Taking time into consideration, we end up in a recursive loop, rather than a static circular movement, as indicated in Figure 3.



*Figure 3: Wikipedia sinus visualisation of a circular movement over time
(Sinus visualisation [image], 2009).*

In this image, each point on the static circle reflects a point on the sinus curve with the x-axis representing a timeline. The input becomes an output after the elapse of time, and not simultaneously. This represents the second solution to the objection of an existing tautology. Although it seems trivial, the consideration of time has been emphasised in the reviewed literature as essential for institutional economics, for instance by North (1993), and it is a major point in this thesis.

A third argument refuting a tautology arises from applying a game theoretic approach. This argument also requires an understanding of the difference between individual behaviour and the collective phenomena of institutional settings as a kind of social dilemma, but not necessarily in a negative sense. Kerr (1983) defines social dilemmas as “situations in which the rational pursuit of self-interest can lead to collective disaster” (p. 819). Even by embedding rational pursuit of self-interest into a wider framework, the central idea of a difference between individual behaviour and the collective outcome remains. Rogers et al. (2007) show that cooperation between team players in a tournament increases the likelihood that one of the team members will win the

tournament although, the others will not be successful. The institutional settings may offer behavioural zero sum game outcomes with which humans are better off collectively than individually. Egoistic behaviour might lead to social dilemmas and therefore individuals are more likely to adopt behaviour which is profitable collectively. Finally, these success strategies are communicated to others, and they adopt them. However, a further game theoretical discussion is not intended to be part of this thesis due to required mathematical formalism. If necessary, I will refer to the work of Farrell (1993, 1995), Rogers, Dash, Ramchurn, Vytelingum and Jennings (2007) and others to present illustrations of related problems. Yet, the indicated phenomena of collective profitable behaviour will be further discussed in the next chapter.

2.5. Synopsis

The circular pattern institutions inducing behaviour and vice versa, is justifiable and not a tautology. The following chapter will continue the reasoning by further defining institutions which have been unattended so far. This will be required for the theoretical synthesis. Yet, important points have been outlined, such as the understanding of behavioural acts as communication in reference to Watzlawick, Beaver and Jackson (1967). Furthermore, reviewed literature shows the exigency of questioning mainstream economic understanding and the need to provide alternative theoretical approaches in order to enrich economic science. The development of insights into the effects of human behaviour on consumption preferences is the motivation for this thesis.

3. Theoretical synthesis

In this chapter, I develop a theoretical synthesis. I discuss the ontological and methodological justification for my approach. The following ontological justification argues the validity of vision (Schumpeter, 1987 [1954]) as a metaphor for changes of perspective. The methodological justification explains the exposure of such visions and their limitations, derived from the philosophies that guide science. Finally, I discuss and define complexity, which is most important because my theoretical synthesis is based on complexity in communication and social acts. Therefore, it seems self-evident to clarify this concept beforehand.

3.1. Preliminary epistemological notes

3.1.1 Ontological justification

In the literature review³, I outline a logical explanation of why the circular relationship between individual behaviour and institutions, or social-cultural values, is not tautological. Heilbroner and Milberg's (1995) conclusion “that unless the social setting of economic behaviour is openly recognized, economics will be unable to play a useful role as explicator of the human prospect” (p. 8), supports this review. Heilbroner and Milberg (1995) refer to Schumpeter (1987 [1954]) on scientific analysis in economics and the necessity of vision in scientific examination. They also refer to Smith (1795) on the purpose and motivation of philosophy and theorising. In his essay on the *History of Astronomy*, Smith (1795) outlines a methodological vindication by defining philosophy as “the science of the connecting principles of nature.”:

Philosophy (...) endeavours to introduce order into this chaos of jarring and discordant appearances, to allay this tumult of imagination, and to restore it, when it surveys the great revolution of the universe, to that tone of tranquillity and composure, which is both most agreeable in itself, and most suitable in its nature.
(p. 20)

In the above quote, Smith (1795) describes the motivation of humans to theorise in the first place: to bring some order into the chaos of cognitive perception of a social world.

³ See pages 42-44.

However, it is obvious that the interpretation of the cognitive perception of societies can differ, and here we can draw a connection to Schumpeter (1987 [1954]). In light of economic history and the different approaches to interpreting human behaviour, he concludes that economic analysis is ideologically biased. Furthermore, he believed that ideological prejudices cannot be shaken off, so they must be accepted. As an example of ideological biases, Schumpeter (1987 [1954]) refers to Keynes's (2008 [1936]) *General Theory of Employment, Interest and Money*, saying that the examined economic characteristics are in fact “the characteristics of England's aging capitalism as seen from the standpoint of an English intellectual” (p. 39). Yet, it is possible to reduce ideological prejudices, as Schumpeter (1987 [1954]) writes, even if we base our research on previous literature. Schumpeter (1987 [1954]) emphasises the importance of vision, the “preanalytic cognitive act that supplies the raw material for the analytic effort” (p. 39). He further describes raw material as those phenomena of the real world that catch our interest, and that we use as starting points for our analytical investigations.

Analytic work begins with material provided by our vision of things, and this vision is ideological almost by definition. It embodies the picture of things as we see them, and wherever there is any possible motive for wishing to see them in a given rather than another light, the way in which we see things can hardly be distinguished from the way in which we wish to see them. (Schumpeter, 1987 [1954], p. 40)

This conclusion and the Smith (1795) argument, given above, are the constitutive thoughts for Heilbroner and Milberg's (1995) promotion of the Schumpeterian vision for the development of socio-economic theory. Vision, or a visionary approach, is inspired by the definition of social phenomena as ideologically-biased raw material embodied in institutional framework (Schumpeter, 1987 [1954]). In addition, vision does not require “virgin soil”; it can grow on “land that had been cultivated before” (Schumpeter, 1987 [1954], p. 39). Furthermore, a visionary approach is necessary to eliminate ideological fallacies and find basic, sustainable, and unbiased rules.

The inspiration for economic methodology came from 19th century physics; this development has been presented in the literature review⁴. Turk (2009) also argues that solid and reflexive social science methodology, including the overall understanding of how societies work, should be applied in economic science. According to him, economic science methodologies should not focus solely on data collection,

4 See the reference to Nelson (1993), Pluta (2010), Marshall (1920) and Mirowski (1989) on pages 12, 16 and 20-21.

measurement and its analysis. Turk (2009) concludes that available statistical data should be ancillary, and not the main aspect of enquiry. De-emphasising the importance of statistics would give the discipline traction in the world, as he describes the compliance of theory with real life.

For economics to have any traction in the real world, we need to develop ways of using interview material to allow our theories to come into contact not just with data, but with real-world phenomena made tangible through data; thus, to have any practical use, they must do more than merely explain data – they must explain some real phenomenon in the world. (Turk, 2009, p. 85)

Thus, Turk (2009) suggests that Archers' (2003) realist social theory in conjunction with narrative interviews, would be an ideal methodology for describing real world phenomena. This theory targets socio-cultural characteristics that determine the dealings of individuals with each other, the subjective understanding of one's environment, and the reflexive processes producing subjective actions from objective realities (Archer, 2003; Turk, 2009). The theory also delivers sustainable data without losing focus on the real world. Weintraub (1991) supports this theory by asking whether existing literature can be understood as a “faithful representation of the true state of affairs” or “rather what the economist creates” (Weintraub, 1991, p. 150). His point is that the difference between theoretical descriptions from different schools of thought in economics, are in fact constructed knowledge. For example, “where Pigou saw an excess supply of labor, Keynes saw a particular level of employment associated with the point of effective demand. Where Solow sees a market failure, Lucas sees rational competitive activity” (Weintraub, 1991, p. 150).

Finally, Weintraub (1991) concludes that the meaning of economic knowledge is rather a result of discourse (Habermas, 1987), or a language game (Wittgenstein, 2009 [1958]). Other authors echo Weintraub (1991)⁵. McCloskey (1983) argues that disputes in economics are based on ad hominem arguments, or the inability of people to interpret facts in the same way. Her epistemological issues with economics are shortly outlined in the literature review⁶. Rubinstein (2000) also favours studying the relationship between economics and language. First, economic agents are “human beings for whom language is a central tool in the process of making decisions and

5 See McCloskey (1983), Rubinstein (2000), Farrell (1993, 1995), Crawford and Sobel (1982) and Dolfsma, Finch and McMaster (2011) for their examination of language and lingual constructions and their meaning for economics.

6 See pages 18-19.

forming judgements” (Rubinstein, 2000, p. 4). The second argument is reciprocal, namely that the study of language can benefit from economic methodology. The idea behind this is to examine whether it is possible to formalise and optimise the use of language as it is done in economics. This approach, however, results a binary and highly structured understanding of languages (Lipman, 2002), comparable with the Shannon (1948) model. Although his first argument supports this thesis, his second argument remains to linear due to the binary relationship of communicating agents. As already mentioned in the literature review⁷, Farrell (1993, 1995) discusses whether the game theoretic term cheap talk has an effect on equilibrium games, because it is defined as free of information on costs, and thus should have no impact on those games. Likewise, Crawford and Sobel (1982) conclude that communication, depending on the depth level of the relationship between the communicating agents, determines the result of an equilibrium game. Outcomes are achieved through either an agreement between like-minded people, or the credibility of one's reputation. That means that for better payoffs like-minded agents required or at least some of them need to have a good reputation. Finally, Dolfsma, Finch and McMaster (2011) define language as an essential institution and, in reference to Searle (1995, 2005) and Luhmann (1995 [1984]), as an agent institutional change. According to them, institutional change as a form of reproduction or re-identification, is vulnerable, because language is imperfect and has boundaries. Thus, Dolfsma, Finch and McMaster (2011) concur.

A fruitful understanding of institutional durability and change would draw in part (...) on communication between systems or societies across the boundaries that separate them. Language constitutes a homogenizing tendency in forming groupings, institutionally mediated, separating an inside from an outside by constructing boundaries that need to be actively maintained. (p. 816)

In conclusion, these examples show that language, or communication, is essential for the development of an accurate, progressive economic science.

Earl (2011), further supports this argument by mooted a methodology which is in fact a lingual construction. He argues that the use of anomalous anecdotes helps behavioural economists to build their reputations. In reference to Thaler (1992), Sunstein and Thaler (2008) and Gabaix and Laibson (2006), he concludes that anecdotes supporting valid empirical data motivates the readers and lead to a broader audience. Gabaix and Laibson's (2006) study, based on the observation that companies hide information in

⁷ See page 42.

order to exploit consumer mistakes, supports Earl's (2011) case. As illustrating case, they describe the situation on the printer market, where manufacturers hide information about add-ons and printing costs for costumers. While basic printers are affordable products, the additional costs for ink cartridges are usually extremely high in comparison. In their conclusion, Gabaix and Laibson (2006) say that "the economics of shrouding suggest some new research questions" and that they "would like to measure the scope of firms' efforts to shroud information" and the "degree of consumer myopia" (p. 532). However, shrouding of information would have a negative effect on the reputation of companies if consumers were rational or fully aware of the situation. Thus, Earl (2011) claims that these anecdotes, which he calls reflective inputs, have the potential to enrich economic theory and that "different kinds of reflective inputs may suggest quite different lessons for economists" (p. 19).

In support of this argument, Wilber and Francis (1986) analyse the holistic approach of Hirschman (1970), and argue that the consideration of multiple influencing factors, based on empirical observation, has advantages over models that are based on assumptions related to how agents would behave if they were rational. Wilber and Francis (1986) conclude that "[Hirschman's] continual reference to the political and social realm as important and vital factors influencing economic development (...) is testimony to the resilience of the holistic method and pattern modelling as an alternative method", yet "the method is distinctly different from the approach of the logical positivist". Thus, "if one is interested primarily in how the real world with all of its imperfections does in fact behave, the Hirschman approach may prove to be more fruitful" (Wilber & Francis, 1986, p. 192).

Seventenn years earlier than Earl (2011), Denzau and North (1994) come to a similar conclusion after "they open[ed] up the black box of rationality" (p. 27), which shows that market allocation predictions generated by substantive rationality models are disappointing and are not as useful as Friedman (1953) suggests⁸. Denzau and North (1994) propose mental models as toos to be used not only for economic decision making but for the human perceptions, their creations, their interaction and their communication patterns. Additionally, mental models are determined by ideologies, institutions and other socio-cultural settings, and the result of this bias is that individuals with similar or equal mental models are better at working together or learning faster. Yet, mental models are not only important for the understanding of how people behave

8 His argument can be found in the literature review on page 27.

but also how theories, originating from ideas, are formulated and transmitted. In fact, “the way by which ideas evolve and are communicated is the key to develop useful theory which will expand our understanding of the performance of societies both at a moment of time and over time” (Denzau & North, 1994, p. 27).

I believe Denzau and North's (1994) approach is limited, however, because it is linear. They discuss the usefulness of mental models for individuals, but not how they originate from or are developed from social interaction. This wider context is more precisely elucidated by Boulding's (1956) image, in which “explanatory advantage (...) is not only that it includes changing preferences and interdependence of individuals, but also that it allows for welfare-enhancing effects through social learning” (Kesting, 2007, p. 332). According to Boulding (1956) “every public image begins in the mind of some individual and only becomes public as it is transmitted and shared” (p. 64) and therefore has more interactive depth than the Denzau and North (1994) concept.

3.1.2. Methodological justification

Following the ontological discussion on scientific inquiry it is now important to suggest methodological approaches for the implementation of, for instance, *visions* (Schumpeter, 1987 [1954]) in economics. Bush (1991) emphasises the importance of different ideas and perspectives for ongoing theoretical discussions and developments on the study of institutional economics. He presents a methodological justification based on the examination of scientific inquiry in economics by providing a logical distinction between value judgement and valuation in terms of an inquiry. According to his definition, value judgement means the selection of instruments or norms, while valuation means the application of norms on one's findings. At the first glance, it appears that the valuation of a value judgement ends up in an infinite logical regression at the first glance because the valuation itself requires a value judgement and vice versa. Thus, the justification for the selection of reflexive inputs (Earl, 2011) seems to be impossible. Bush (1991) addresses this conundrum by formulating the following methodological process that overcomes such an infinite logical regression.

(1) On the basis of prior inquiry, a value judgement is made in the selection of a standard of judgement (value); (2) the standard of judgement (value) is applied in a valuation; (3) the experimental consequences of the valuation are assessed for the continuity of inquiry; (4) this assessment is used to reevaluate the appropriateness of the value judgement; (5) if the value judgement is found to be

instrumentally efficient (...) it is retained and accepted (...); if it is rejected, a new value judgement must be formulated, and the process of valuation is repeated until an adequate judgement (value) can be established. (p. 334)

Bush (1991) refers to Dwyer's (1986) paper on value justifications by stating that some "hypotheses must be accepted without any further justification" (p. 96) in order to avoid infinite logical regressions. However, such unproven or unjustified hypotheses must be self-evident, robust statements. Dwyer (1986) find this robustness in the claim "that something serves a human purpose or fulfils some general conditions for the satisfaction of human interests" (p. 97). He sees no need for a further justification since the common sense behind this statement is self-evident enough to provide a starting point for scientific inquiry.

Kant (2008 [1781]) describes such self-evident statements as synthetic. In his *Critique of Pure Reason*, he distinguishes between synthetic and analytical statements that are either a priori or a posteriori. Kant (2008 [1781]) concludes that only synthetic statements have an epistemological value, while analytical statements do not reveal anything beyond the intention of the subject. For example, 'AUT is a university' is an analytical statement. Since the word university is part of AUT, the statement that AUT is a university is redundant. Therefore, epistemology requires synthetic statements. It follows that Dwyer's (1986) statement "that something serves a human purpose" (p. 97) must be understood as synthetic statement a posteriori because it is based on the perception of human interactions. In addition, "something" is too vague to deduce "human purpose", thus, it cannot be analytical.

Bush (1991) also finds justification for his stance in Peirce's (1931) pragmatism and his concept of abductive reasoning or Popper's (2002 [1935]) explanation of fallibilism in the *Logic of Scientific Discovery*. Peirce's (1931) idea of pragmatism and logic of abduction is an epistemological method in which abduction is "the process of forming an explanatory hypothesis"; while "deduction proves that something **must** be; Induction shows that something **actually is** operative; Abduction merely suggests that something **may be**" (Ch. 6.171). This means that abduction is used to formulate a hypothesis that is then tested by deductive and/or inductive processes, yet abduction requires no other justification than the provision of suggestions for testing methods.

Popper (2002 [1935]), in contrast, concentrates on inductive and deductive methodologies rather than the formulation of hypotheses themselves. For him, hypotheses or theories are based on singular observations in which the principle of

induction is applied, instead of assuming that “know[ing] by experience” (Popper, 2002 [1935], p. 4) is a valid justification. This means, that a “universal statement can somehow be reduced to the truth of singular ones, and that these singular ones are known by experience to be true” (Popper, 2002 [1935], p. 4). This, in turn, leads to the question of a universal statement’s verity in relation to the validity of the inductive process and its logic. Here, Popper (2002 [1935]) sees a problem in the principle of induction. He describes an infinite logical regression in its justification, similar to the one described above, and doubts Kant's (2008 [1781]) statement that it would be valid a priori. Further, Popper (2002 [1935]) rejects inductive logic for testing the validity of universal statements, based on Hume's (2010 [1740]) discussion of the problem of induction. On the contrary, he concludes that singular statements are only applicable for the falsification of universal statements and that “every discovery contains 'an element of irrational' or 'a creative intuition’” (Popper, 2002 [1935], p. 8). So, Popper (2002 [1935]) sees the abductive element as irrational and arbitrary, but that does not matter as long as it remains open for falsification. In the light of this argument, it is possible to draw a connection to Bush's (1991) stance. For Popper (2002 [1935]), like Peirce (1931), it is impossible to logically justify the first basic value judgement, without ending up in a logical regression. According to him, such judgements, wherever they come from, must face a methodological valuation in the way that Bush (1991) describes. Before I present a first conclusion, the importance of complexity need to be clarified in the following sub-chapter.

3.1.3. The complex world and its patterns

Complexity is also a subcategory of the ontological justification. In the literature review, I outlined the necessity of viewing human behaviour and interactions as complex, rather than simple. My view is supported by Deleuze and Guattari (1987), Berger and Luckmann (1966) and Moscovici (1988, 1994, 1998), Marková (1996, 2003) and Moscovici and Marková (1998), whose theories also deal with complexities.

In an interview for *Nature Physics*, Nigel Goldenfeld notes that “complexity starts when causality breaks down” (Editorial, 2009, p. n.a.). Yet, this short explanation is not satisfying as it lacks precision. Thus, it is necessary to examine other definitions from various scientific disciplines. An early and highly influential discussion of complexity in relation to science was written by Weaver (1947). Weaver (1947) states that the 17th, 18th and 19th Century science is mostly concerned with simplicity and the examination

of correlations between a few variables. Later, scientists began to use statistical methods to understand the complexity of nature. He describes complexity in two forms: disorganised complexity and organised complexity.

In disorganised complex systems elements are not interdependent but the system as a whole underlies statistical methods. To illustrate this, Weaver (1947) uses pool billiard, where the movement of the balls can only be represented by statistical probability. In contrast, organised complexity concerns problems “which involve dealing simultaneously with a sizable number of factors which are interrelated into an organic whole” (Weaver, 1947, p. 541). For instance, the biochemical functions of groups of cells in a complex system. In respect of the economy, Arthur (1999) states that “common to all studies on complexity are systems with multiple elements adapting or reacting to the pattern these elements create” (p. 107). Likewise, Rind (1999) writes that “a complex system is literally one in which there are multiple interactions between many different components” (p. 105). In addition, Weng, Bhalla and Iyengar (1999) conclude that “in a general sense, the adjective 'complex' describes a system or component that by design or function or both is difficult to understand and verify” (p. 92). Foote (2007) describes complexity in a more detailed way.

In recent years the scientific community has coined the rubric 'complex system' to describe phenomena, structure, aggregates, organisms, or problems that share some common theme: (i) They are inherently complicated or intricate (...) (ii) they are rarely completely deterministic; (iii) mathematical models of the system are usually complex and involve non-linear, ill-posed, or chaotic behavior; (iv) the systems are predisposed to unexpected outcomes (so-called emergent behaviour). (p. 410)

In conclusion, economics deals with the organised complexity of markets. Economists analysing these complex markets have to deal “simultaneously with a sizable number of factors which are interrelated into an organic whole” Wackerbauer, Witt, Atmanspacher, Kurths and Scheingraber (1994), and Ladyman, Lambert and Wiesner (2011) argue that “a complex system is an ensemble of many elements which are interacting in a disordered way, resulting in robust organisation and memory” (p. 25). These characteristics include the ensemble of elements, the interaction, the memory, the disorder and the robust order. While the first two characteristics are obvious, the others seem to contradict each other. Yet, this is not the case. Ladyman, Lambert and Wiesner (2011) place disorder within the interaction of the elements in a the complex system,

while the robust order is understood as the preservation of organisational patterns. Here, robust order has an equal meaning as Weaver's (1947) organised complexity. Using this description, we can define institutions as described by Potts (2007), Hodgson (2006) or Dolsfma (2004), as complex systems because, "although the elements [institutional agents] continue to interact in a disordered way the overall patterns and structures are preserved" (Ladyman et al., 2011, p. 27).

According to Ladyman, Lambert and Wiesner (2011) memory "is a straightforward corollary of robust order" (p. 27), and institutional structure, the final characteristic of a complex system, is preserved by collective recall. Furthermore, "a system is complex if it can generate data series with high statistical complexity" (Ladyman et al., 2011, p. 27). This qualitative definition refers to data measures (Wackerbauer, Witt, Atmanspacher, Kurths, & Scheingraber, 1994).

The robustness of complex systems arises from hierarchical structures, although the interaction is disordered. Contrary to a physical or biological system, high-level elements of institutions or social systems do not consist of low-level elements. In biology, a complex organism consists of cells, which in turn consist of atoms. This is a straight-forward hierarchical structure not necessarily existing in institutions and social systems. "The CEO of a company, for example, does not 'consist' of her employees" (Ladyman et al., 2011, p. 30)⁹. A similar example is illustrated by England (1993), who criticises Becker's (1981) view of a self-interest market attendee altruistically representing his families preferences¹⁰. Yet, it is possible to resolve this problem. Ladyman, Lambert and Wiesner (2011) abandon structural hierarchy as a solution and point towards the concept of representation. A simple example is the United Nations trade negotiations committee, which is comprised of delegates who represent the member states and their people. Both the trade negotiations committee and single societies are complex, but differ in their hierarchical level; thus "social hierarchies can combine to larger and larger systems through the mechanism of representation" (Ladyman et al., 2011, p. 30).

As mentioned above, it is the search for organisational patterns that is necessary for descriptive and predictive theoretical work. Even in the examination of complex systems patterns must be found, because "where utter patternlessness or randomness

9 This reasoning is similar to the emergentism represented by Mill (Mill, 2004 [1843]) and Broad (2001 [1925]) and found in critical realism elaborated by Archer, Bhaskar, Collier, Lawson and Norrie (1998).

10 The detailed discussion on self-interest and altruism is on pages 23-24.

prevails, nothing is predictable” (Dennett, 1991, p. 30). According to Dennett (1991), pattern’s explanatory and predictive power determines their usefulness. A memorable illustration of the power of patterns is given by Wallace (2003). In his thought experiment he describes the behaviour of a tiger hunting its prey. If we understand the situation as a pattern of the physical world, we could hypothetically “model the entire tiger, prey [and] environment system on the sub-atomic level and study its dynamics according the laws of quantum mechanics” (Ladyman et al., 2011, p. 30). This is a futile undertaking due to the estimated 10^{35} simultaneous dynamical equations needed for an appropriate model (Wallace, 2003). Therefore, Wallace (2003) concludes that “a tiger is any pattern which behaves as a tiger” (p. 7). In fact, current economic models are patterns of the latter definition. Friedman (1953), for instance, states that the pattern of rationality in neoclassical theory is an average approximations of how agents behave. I have already illustrated this point in the literature review¹¹. Dennett (1991) also strongly emphasises pattern’s usefulness when applied to behavioural activities in complex socio-economic systems.

3.1.4. Initial conclusions

Without going into a detailed discussion on the philosophy of science and the philosophy of economics in particular, I argue for an ontological pluralism within economic science. This serves the development of economic theory in regard to the critical assessment of current economic research practises. Yet I dissociate myself to some extent from Feyerabend's (1993) claim that anything goes. In contrast, I believe the ontological pluralistic origin of value judgements has to be tested by continuing assessment and evaluation (Bush, 1991). For this purpose accredited and valid methodologies from economic and social sciences are required. to test hypotheses, in such as Popper's (2002 [1935]) fallibilism.

Schurz (2011) delineates four epistemological corner-stones that set limits to methodological openness. The first two are Popper's (2002 [1935]) fallibilism and minimal realism, metaphysical assumptions supporting an existing reality independent of the accuracy of our description of it (Heichele, 2010a). Haack (1987) states that “it does not require that truth be conceived specifically as a relation between some truth-bearing item and the world or some aspect of the world” (p. 227). Although we cannot know if perceptions are in absolute agreement with reality, we need reality as a basis for

11 See page 27.

our perceptions.

The third epistemological corner-stone, the intersubjective objectivism, states that knowledge has to be as impartial as possible, and has to be reproducible (Schurz, 2011). He also claims that distinguishable and reproducible perceptual observations have to be used to gather information about reality itself, a concept called minimal empiricism (Schurz, 2011). A famous counter-example is Russell's (1997 [1952]) teapot. In his analogy he describes a teapot flying in an orbit between Earth and Mars which remains undetectable despite modern technology and any future technological progress. In the end, the teapot has no epistemological value because it eludes itself from the minimal empiricism and finally from the methodology. Therefore, the methodology remains constrained in comparison with the ontological pluralism and therefore methodologies cannot be as arbitrary as Feyerabend (1993) suggests. Furthermore, value judgements are synthetic statements made a posteriori and must be regarded as self-evident. They can be also understood as Popper's (2002 [1935]) irrational elements. Therefore, the following theoretical synthesis does not totally justify the relatedness of its elements, however, it can be explained with intuitive examples, aiming at minimal realism. Furthermore, the short discussion on complex systems serves, in reference to the critiques on neoclassical theory in the literature review, for the underlying understanding of complexity and its theoretical necessity. With Dennett (1991), Wallace (2003) and Ladyman, Lambert and Wiesner (2011) in mind, it is the search for appropriate descriptive patterns. Finally, the added case study shall be a first attempt to falsify (Popper, 2002 [1935]) the proposed theory.

3.2. Rhizomes and a thousand plateaus

The theoretical synthesis begins with the theory of rhizomes by Deleuze and Guattari (1987). Their work serves to provide a background understanding of communicational acts. Deleuze and Guattari's (1987) rhizomes are complex by definition (Ladyman et al., 2011). Parr (2005) summarises rhizomes as “rather than reality being thought of and written as an ordered series of structural wholes (...) the story of the world and its components (...) can be communicated through rhizomatic operations of things – movements, intensities and polymorphous formation” (p. 323). In addition, Lawley (2005) emphasises that the importance of rhizomes lies in the relationship between elements and not the elements themselves. He concludes that “fixed entities are replaced by an indeterminate” where “new relations and possibilities are continually created”

(Lawley, 2005, p. 37). So, rhizomes serve as a way of thinking or understanding the world.

Rhizomes are related to communication, as discussed. The linear sender-receiver-model by Shannon (1948), which explains how messages are transferred from one individual to another, consider a possible noise source, which might interfere with or distort the message. Furthermore, I referred to Watzlawick, Beavin and Jackson (1967) and their concept of communicational acts, which can, to some extent, also be understood as social discourse as defined by Habermas (1987). Watzlawick, Beavin and Jackson (1967) expand the definition of communication to include relationships between communicators. More importantly, they offer the insight that communication has no absolute antagonism¹². In this case, if a thought experiment is used to examine social interactions, it is questionable whether a lone person really communicates, since they are not part of a social environment. In terms of mainstream economic theory, this thought experiment applies to Homo oeconomicus operating in a market, which has been criticised earlier in the literature review¹³. This claim is only valid within a proposed system such as a social environment. Yet, the importance of the statement by Watzlawick, Beavin and Jackson (Watzlawick et al., 1967) lies in its consequence for institutional economics. I argue that communicational acts constitute social behaviour and, as Dolfmsa (2004) also concludes, they are indispensable for the understanding of consumption patterns.

Deleuze and Guattari's (1987) rhizomes are an abstract conceptual perspective on the nature of communicational acts. They explicitly avoid the classical dichotomous root-explanatory framework. An example for such a root-explanatory framework is offered by Deleuze and Guattari (1987), who refer to the *Chomsky Hierarchy* (Chomsky, 1956a, 1956b), which is illustrated in Figure 4.

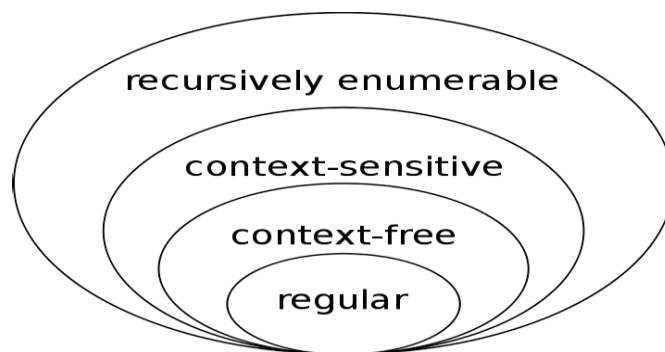


Figure 4: Sets of grammar in the Chomsky Hierarchy (Chomsky hierarchy)

12 One cannot not communicate.

13 See, for instance, England (1993) and Sen (1977) on pages 24-26.

[image], 2010)

In short, Chomsky (1956a, 1956b) proposes that varying grammars, which constitute different languages, are based on each other in a hierarchical order. This concept serves as an illustration for a major critique of linguistics, where “this system of thought has never reached an understanding of multiplicity” (Deleuze & Guattari, 1987, p. 5). Thus, Deleuze and Guattari (1987) reject this hierarchical structure of languages in favour of their rhizome. *A Thousand Plateaus* also represents Gilles Deleuze’s rejection of rationalism and Hegelianism in particular (Parr, 2005).

However, at this point I will not discuss their critique in more detail since the interest of this thesis is directed towards their rhizomes and not in their critique of linguistics or any other philosophy. This critique of hierarchy can be applied to the study of economics. As Lima (2011) explains, the rhizome itself is also a critique of the tree-metaphor of knowledge, first describe by Aristotle. This tree-metaphor can still be found in various sciences, for instance the tree of life in biology, the hierarchical top-down illustrations of firms in management literature or in Maslow's (1943) hierarchy of needs. In economic science, Mill's (1871) concept of higher and lower pleasures, and Edgeworth's (1881) principle of the human as “pleasure machine” (p. 15), stand in the tradition of the tree-metaphor. This concept of utility maximisation also motivated Veblen's (1998 [1898]) challenge of the view that humans are consumers irrespective of social institutions. The rhizome, in contrast, breaks this strict hierarchy to allow for interdependencies in forming preferences, in the same way modern biologists speak of a web of life instead of a tree of life (Lima, 2011).

3.2.1. What is a rhizome?

Deleuze and Guattari's (1987) concept of rhizomes must be understood as an antagonism to the hierarchical ways of thinking illustrated by Chomsky (1956a, 1956b). Rhizomes are maps rather than tracings and they are not limited to linguistics or philosophy (Deleuze & Guattari, 1987). Smagorinsky, Augustine and Gallas (2006) interpret rhizomes in detail.

[The rhizome is a] term to represent social systems that expand horizontally, producing multiple shoots that interweave throughout the system and may break off to form whole new systems that create, or map, new possibilities for growth. No one part of the rhizomatic structure is central or authoritative; any part can conceivably generate new growth equally as well as any other. (p. 88)

Applied to institutional economics, this definition allows us to understand the emergence of institutions from a social rhizome which contains the possibility of spontaneous growth described by Smagorinsky, Augustine and Gallas (2006). Economically familiar terminologies for these spontaneous appearances are Schumpeter's (1987 [1954]) creative destruction or Hayek's (2003 [1968]) competition as a discovery procedure. However, Deleuze and Guattari's (1987) thoughts on social systems and power differences, something which has not been captured in the definition above, are explained later.

Deleuze and Guattari (1987) identify six principles that they regard as determinants for a rhizome. The first two are connection and heterogeneity; a rhizome is a heterogeneous and highly interconnected system. Deleuze and Guattari (1987) also write that "a rhizome ceaselessly establishes connections between semiotic chains" and "there is no language in itself, nor are there any linguistic universals, only a throng of dialects, patois, slangs, and specialized languages. There is no ideal speaker-listener, any more than there is a homogeneous linguistic community" (p. 7). These two points highlight the anti-hierarchical, decentralized characteristics of rhizomes. In fact, Dolfsma (2004) concludes from the Friedman (1990) case study on the *La Sape* movement in Africa that it is impossible to construct an order of consumption patterns based on economic rationality. There is no rational hierarchy in consumption patterns, either, only a heterogeneous crush of equally legitimate tastes and preferences. This is further discussed in the book *Shifting Involvements* by Hirschman (2002 [1982]) who examines ideological and emotional impacts on private interests and public action in relation to preference formation.

The third principle is called multiplicity and claims the absence of direct objects and subjects. Deleuze and Guattari (1987) explain that "there is no unity serving as a pivot in the object (...) a multiplicity has neither subject nor object, only determinations, magnitudes, and dimensions that cannot increase in number without the multiplicity changing in nature" (p. 8). In their metaphorical example, they refer to a puppet controlled by its strings. There is no hand in control of this puppet, only a multiplicity of nerves connected to a more complex neuronal-multiplicity. Not the puppet, the object, itself is of interest but the movements of the strings, controlled not by a subject but by another multiplicity. Thus, there are no objects or subjects, but only multiplicities connected to each other (Deleuze & Guattari, 1987). Applying this principle to a social system with all its existing institutions as a rhizome, indicates that a change in one of

the institutions will change the entire social rhizome. The concept of emergence in critical realism (Archer et al., 1998) has been mentioned in a footnote above. Translating Deleuze and Guattari's (1987) description into Archer et al.'s (1998) vocabulary, it means that we find different levels of emergent properties, or cumulative circular causation defined by Myrdal (2009 [1944])¹⁴, in the social world.

The fourth principle is called asignifying rupture, which means that a shattered rhizome will reorganise itself and create new strings to replace the old, broken strings. If a market is a rhizome, for example, the creative destruction of entrepreneurs as described by Schumpeter (1987 [1954]) operates under the principle of asignifying rupture. In their illustrating example, Deleuze and Guattari (1987) refer to a collective of ants as a rhizome. Ants are organised heterogeneously and in multiplicities, they communicate through chemical pheromones, and form specific hunting and supply routes or 'streets' (Ratnieks & Jackson, 2006). In the absence of subjects and objects, only their movement and not the ants themselves are of interest for our understanding of the rhizome. Yet, even when a great number of ants are killed, their chemical trails are destroyed, they will prevail and form new routes or reconstruct the old ones in a slightly different way. It is impossible to stop ants unless one destroys the complete organisational collective (Deleuze & Guattari, 1987).

The fifth and sixth principles are called cartography and decalcomania. Other than the reproducible principle of tracing, which can be broken down to constituents and analysed that way, a rhizome represents a map with multiple entry points. It does not fit into a structural or generative model. The map itself must change with the development of the rhizome. Thus, according to Deleuze and Guattari (1987) the map separates and selects parts of the rhizome and does not reproduce it, just as a photograph is distinct and not a reproduction of an object in nature.

What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real. The map does not reproduce an unconscious closed in upon itself; it constructs the unconscious. It fosters connections between fields, the removal of blockages on bodies without organs, the maximum opening of bodies without organs onto a plane of consistency. It is itself a part of the rhizome. The map is open and connectable in all of its dimensions; it is detachable, reversible, susceptible to constant modification. It can be torn, reversed, adapted to any kind of mounting, reworked by an

¹⁴ Myrdal has been mentioned in the literature review and will be further discussed later.

individual, group, or social formation. (Deleuze & Guattari, 1987, p. 12)

The authors also emphasise that an organised structure can exist within a rhizome, “every rhizome contains lines of segmentarity according to which it is stratified, territorialized, organized, signified, attributed, etc.” (Deleuze & Guattari, 1987, p. 9). Applied to communicational acts, this concept defines communication as a non-self-contained process of information exchange in which the communicators and receivers and their relationships, are in a state of flux.

Finally, the answer for why rhizomes develop in the first place can be found in the concept of desires (Deleuze & Guattari, 1987). It needs to be clarified that Deleuze and Guattari (2004 [1972]) use the term desire not in terms of the conscious desires understood in common language. Furthermore desire must also be distinguished from interest. Smith (2007) explains that interest means in Deleuze and Guattari's (1987, 2004 [1972]) vocabulary the pursuit of conscious aims for the definition of one's own social status. For instance, becoming an academic constitute interest, because it requires the ability to write theses, journal articles, and to take courses, and this constitutes interest. Desire is “the state of the unconscious drive” and “interest exists as a possibility only within the context of a particular social formation” (D. W. Smith, 2007, p. 74) the former constitute the latter within those social formations. Deleuze and Guattari (2004 [1972]) describe desire as a mental production of reality or fantasies. According to them, desire is not the lack of an object determined by needs because those needs are themselves based on desires.

Translated into economic terminology, desires are not needs but wants (Frankfurt, 1971), though not in the neoclassical sense, because they are socially constructed and embedded. Furthermore, desires are not only individual, as Smith (2007) observes; they are socialised and can be observed in the fact that individuals defend specific social formations by their actions although those formations might be contrary to their personal interests. Smith (2007) describes his interest in a specific brand of tooth-paste, for example, which is induced by the social desire of having white teeth and a fresh breath. He states that it is “the social formation that creates that interest, and that creates the sense of lack [he] feel[s] if [his] teeth aren't whiter than white, or [his] breath fresher than fresh” (D. W. Smith, 2007, p. 74). Although the interest in brands is questionable, the underlying desire for white teeth remains unassailable.

The same argument can be applied to emotional bonds. Earlier I discussed England's (1993) feminist perspective on altruism, empathy and social solidarity, characteristics

that can be interpreted as desires in Deleuze and Guattari's (2004 [1972]) sense¹⁵. Furthermore, desire plays a complex role as both producer and being produced in the Deleuze and Guattari (1987) model, distancing the authors from the neoclassical paradigm, within which desire is defined as the maximisation of individual utility. Thus, every time a desire is constructed due to the lack of an object of interest, the desire itself simultaneously creates a reality in which the object of interest must be available. To some extent, these desires, both producer and being produced, can be identified in Boulding's (1956) image as well, his concept allows us to pursue "a value-laden public welfare image" (Kesting, 2007, p. 331). The desire for white teeth creates a reality in which teeth can be whiter than they are now. Furthermore, this individual desire can be combined with others, so that white teeth become not only a self-referring desire, but also support a desire for health, beauty and well-being. This conclusion is Deleuze and Guattari's (2004 [1972]) justification for assigning desires a fundamental role in their philosophies.

Desire, in turn is directly linked to six principles defining rhizomes. For example the internet or web, which Kelly (2008) describes as the biggest man-made machine, is considered to be a rhizomatic-like map of communication. This communication machine has run uninterrupted for 5000 days. In 2012, almost five years later since its inception, the number of days has increased significantly. The Opte Project (2003) has designed a map of the internet, based on the interconnection of websites counted by the numbers of links, not the number of computers (Figure 5).

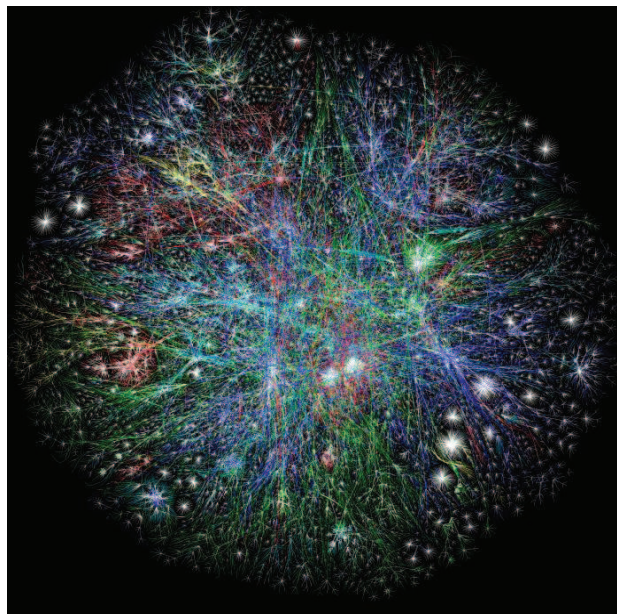


Figure 5: The map of the internet showing the interconnectivity between

15 See pages 24-26.

In order to give an impression of dimensions, Kelly (2008) counts 55 trillion links between websites and one quintillion transistors¹⁶ necessary for worldwide computation, which is almost the same number as synapses and neurones in the human brain. Furthermore, he predicts that the web will outrun humanity in this comparison by 2040, based on the speed of past web evolution. This means that the web will have more links than the human species has synapses, estimations for world population by 2040 are between 8 and 9 billion (Department of Economic and Social Affairs: Population Division, 2004).

The internet has evolved from the interconnection of computers to the interconnection of ideas as a web (Kelly, 2008). Wikipedia illustrates this concept best, where in one article several phrases, terms or words are linked to their own home pages. Cicconi (1998) describes the web as the evolved rhizomatic encyclopedia of human knowledge, and he asks, “Aren't hypertexts one concrete realization of the complex rhizomatic structures?” (p. 35). The web is in fact highly interconnected and heterogeneous and each website itself is more or less a multiplicity, as Wikipedia webpages illustrate.

Given that, it is rather trivial to refer to the first three principles of Deleuze and Guattari (1987). It is obvious that the web underlies the fourth principle of asignifying rupture, whether the rupture is a physical destruction of equipment, or any kind of censorship, it will redefine the web organisation. For example, Roberts, Zuckerman and Palfrey (2009) come to the conclusion that existing circumvention software “is relatively easy and well known” and “that all of the circumvention and anonymity tools (...) succeeded at the basic task of retrieving blocked content in a filtering country” (p. 85). Thus, it is impossible to fully control the spread of contents through the web. Furthermore, there has never been a time in which the web has been offline since its invention (Kelly, 2008).

Figure 5 is only a map, not a reproduction, and a part of the web at the same time. As Kelly (2008) emphasises, each device, whether it is a computer or a smart phone, is a “window into the cloud” (p. n.g.). This window can show parts of the web but is not able to reproduce the web in its entirety. There are in fact no copies, only maps which must be changed every time one changes the perspective on the web or when the web is changed itself. Yet, the *web* cannot be understood as an independent rhizome; it must be understood in its socio-cultural context, the rhizomatic structure it forms with other

¹⁶ Which is 1×10^{18} in short scale measurement.

rhizomes. Deleuze and Guattari (1987) highlight this idea by using books as an example. According to them “a book exists only through the outside and on the outside” (p. 4). The book itself has no object; it is a map of the world’s multiplicities, like the computer connected to the internet is only a map of the informational multiplicities of the web.

In summary, Deleuze and Guattari's (1987) rhizomes provides a thinking methodology, or philosophy, that allows us to understand the complex structure of the web. It has no hierarchy, no beginning and no end, just multiplicities which can barely be broken down without losing the understanding of its functionality. To add complexity to the issue, there are multiple entry points to the web, or internet or cloud, as Deleuze and Guattari (1987) claim. Depending on perspectives, people can access the web from different angles. Interestingly, Kelly (2008) observes that phenomena such as Wikipedia or Youtube were considered impossible, because there were no economic models for them, yet they now exist. The existence of the impossible provides another argument supporting a rhizomatic understanding of the economic and social world. Altogether, the web can be understood a centre for the exchange of ideas, opinions, knowledge and supports communication between individuals and groups. These acts of communication represent the “lines of segmentarity” (Deleuze & Guattari, 1987, p. 9) in a network of heterogeneous multiplicities, which alter and evolve continuously.

3.2.2. Communication, rhizomes and plateaus

In addition to the rhizome’s six principles there are plateaus that characterise rhizomes as well (Deleuze & Guattari, 1987)A plateau is a “continuous, self-vibrating region of intensities whose development avoids any orientation toward a culmination point or external end” (Deleuze & Guattari, 1987, p. 22). The web, seen as shared information and ideas (Kelly, 2008), is a specific example of communication and can be understood from a rhizomatic perspective, with dense networks such as Wikipedia represented as plateaus, in themselves rhizomes.

I argue, that communication itself is rhizomatic and institutions are the related plateaus, they are “self-vibrating region[s] of intensities” as Deleuze and Guattari (1987, p. 22) describe them. Institutions are characterised by similar regions of intensity in contextual communication; they show a communication signature with which their members identify. Yet, contexts may vary, and members may identify themselves with different institutions at the same time.

Social interactions are obviously complex and heterogeneous with each act of behaviour also defined as an act of communication. Individuals are communication agents who communicate along the lines that multiplicities form (Deleuze & Guattari, 1987). The relationships between individual agents, rather than the agents themselves, are of special interest (Lawley, 2005). The lines of communication in the rhizome are important as mentioned above. Even in a simple speaker-listener situation, communication remains complex due to the processing that occurs in the each brain's complex neuronal network (Farber, 2000 [1966]; Kahneman, 2002). Thus, communicational acts can be interpreted as interactions of multiplicities (Deleuze & Guattari, 1987). On a social scale, communication is more complex by the interaction of multiple agents. Even in an organisation, a company for example, there are not singular and independent hierarchical acts of communication between agents, "as if the speaker moved from one to the other" (Deleuze & Guattari, 1987, p. 93). In fact, organisational communication remains rhizomatic despite hierarchical structures, since communicational acts are not only vertical but also horizontal in a social environment. Such insights are important features of the competence theory of the firm developed by Nelson and Winter (1982), and further contributions by Foss (1993), Penrose (1952) or Noteboom (1996). Hodgson (1998b) believes that the economist who subscribe to the competence theory, "sees the existence, structure and boundaries of the firm as explained in some way by the associated existence of individual or team competences" and "provides the basis for evolutionary and non-equilibrium theories of industrial competition and development" (p. 25).

From a rhizomatic perspective, Deleuze and Guattari (1987) see societies consisting of three types of lines. The first line is the rigid line which delineate structures such as organisations and institutions, as habits of thought (Veblen, 1998 [1898]). Alongside the rigid line there exists the line of primitive segmentarity representing the rhizomatic movement and the constitution of social environments. Primitive segmentarities are further constituted by polyvocal codes and ambient territories. Deleuze and Guattari (1987) describe polyvocal codes as "based on lineages and their varying situations and relations" and the ambient territories as "based on local, overlapping divisions" (p. 209). Like rhizome and segmentarities, both code and territory are abstract words with multiple meanings. Berry and Pawlik's (2008) discourse on codes emphasises this insight and the difficulties in understanding what codes are. According to them code has become "a structural feature of contemporary society, an architecture for our technologically controlled societies" and "it serves as a translation between different

discourses and spheres” (Berry & Pawlik, 2008, p. 56). It is important to note that Gilles Deleuze believed that we live in societies of control¹⁷, in which movements are based on desire, and therefore code controls and enabled discourses in societies. Thus, code is semiotic, i.e. it is a system of multiplicities that establish the meaning, the origin and the usage of symbols in public discourses. For example, Berry and Pawlik (2008) describe law as code in terms of justice. Yet, the state or government runs on faulty code of law that can and must be rewritten and restructured. In summary, code creates hierarchies and structure in the related territories. Therefore, territories must be defined as the context of relations formed by codes. Considering the example by Berry and Pawlik (2008), justice can be understood as a hierarchical structured, primitive segmentarity, defined by specific codes, which is enacted within a context known as a territory.

Third, the line of flight, “defined by decoding and deterritorialization” (Deleuze & Guattari, 1987, p. 222), serves the purpose of an evolutionary or continuous characteristic of a rhizome (Lawley, 2005). Foucault (1976), a French post-structuralist, outlines a similar terminology by defining resistance as an attack on established power relations, which he in turn defines “as the multiplicity of force relations immanent in the sphere in which they operate” (p. 92). It follows that lines of flight and resistance are antagonistic not only for established powers in a political sense, and can therefore be considered an example of Schumpeter's (1987 [1954]) creative destruction in the context of market establishments. Where primitive segmentarities are concerned, the lines of flight re-contextualize territories and allow the re-writing and re-execution of faulty codes (Berry & Pawlik, 2008). Any public discourse that implies a re-defining of justice is based on a line of flight. In conclusion, social and individual life is determined by movements along these three types of segmented lines. These lines differ in terms of perspective, and sometimes they are combined by different groups or in different situations. For instance, being at home follows a different set of lines from being at school in regards to territories, codes and underlying desires (Deleuze & Guattari, 1987).

Yet, the object is not necessarily important for the segmented line itself, as Deleuze and Guattari (1987) illustrate in their example of communal buildings used by tribe- or family-structured societies.

17 Deleuze stands in the tradition of French post-structuralists and their theories of society such as Foucault, with whom he worked for some time and with whom he maintained a personal friendship (Eribon, 1991). Moreover, he engaged with Jacques Derrida, Jean Baudrillard and Jacques Lacan, whose work about psychoanalysis he and Felix Guattari sharply criticized in a rebuttal titled *Anti-Oedipus* (Deleuze & Guattari, 2004 [1972]).

The social segments have a certain leeway, between the two extreme poles of fusion and scission, depending on the task and the situation; there is also considerable communicability between heterogeneous elements, so that one segment can fit with another in a number of different ways. (Deleuze & Guattari, 1987, p. 209)

In analysing modern societies, Deleuze and Guattari (1987) introduce their distinction between rigid lines and primitive segmentarity: modern societies apply more rigid lines than do tribal societies. This illustration overcomes the dichotomy between segmentary structure and centralisation, because even modern societies display a high degree of segmentary lines. As an example, Deleuze and Guattari (1987) point to the specific example of bipolarity of gender roles, a primitive segmentarity. Thus, primitive segmentarities of gender roles are embedded in different rigid lines, which constitute different institutions or social groups. This leads to different expectations of male and female members of different social groups, and vice versa; finally, “it seems that modern societies elevated dual segmentarity to the level of a self-sufficient organization” (Deleuze & Guattari, 1987, p. 210).

Deleuze and Guattari (1987) illustrate the interconnected and heterogeneous characteristics of multiplicities with three types of lines, and the authors define the three lines’ specific meanings for socio-cultural entities, which is illustrated in the following example: Where the primitive segmentarity of gender roles is already known, political ideologies, sciences and the arts can be represented by rigid lines, and feminism can be represented by lines of flight, because feminism itself varies from country to country, and from culture to culture. Feminist scholars like England (1993) and Nelson (1993) introduce insights, which I have already mentioned, from feminist research into economic science¹⁸. Black (1989) also examines the impact of feminism on research methodology in Canadian political science. Likewise, Blakeley and Bryson (2007) discuss the impact of feminism in political debates, and Wandor's (1984) explores theatre and its relationship with feminism. Finally, a social overview on feminism and its impact on different social areas or, in this case, primitive and rigid segmentarities can be found in Fort and Stevens (2010).

It is worth introducing Deleuze and Guattari's (2004 [1972]) thoughts on desire to the feminist perspective. According to them, there must have been a situation or a time in which *desire* produced at least an image of a social reality that was different from the

18 See pages 17 and 23-24.

existing one, a feminist utopia. This image of reality is the initiator of the re-contextualisations of societies' existing primitive and rigid segmentarities. In other words, the existence of an alternative image, or vision, allows humans to question and re-think gender roles. These examples show that feminism has had, and still has an influence on multiple areas in societies and vice versa. This fact is today accepted as common knowledge, while the particular level of influence might remain a subject for discussion. According to the theories of Deleuze and Guattari (1987), the historic development of societies and the influence of feminism is therefore a reorganisation of segmentarity lines, and an evolution and restructuring of the social rhizomes. For example, as a direct result of feminism and emancipation, women have gained wider access to the labour market, and formerly male-only occupations. On the other hand, persistent wage gaps, occupational segregation and glass ceiling effects still dominate the modern labour market (Blau, Ferber, & Winkler, 2009). This situation reveals the existence of specific primitive and rigid segmentarities.

At this point it is finally possible to refer to Ladyman, Lambert and Wiesner (2011) and evaluate their characteristics of complex systems in terms of rhizomes. Their points of various elements, interaction of multiple agents and a general disorder are in fact similar to Deleuze and Guattari's (1987) principles of heterogeneity, interconnectivity and multiplicity. Ladyman, Lambert and Wiesner's (2011) description of robustness and memory are similar to codes and territories concepts mooted by Deleuze and Guattari (1987). As discussed above, the semiotic characteristics of codes constitute both the robustness and the spreading of segmentarities to their related contextual territories. The codes of primitive segmentarities, such as gender roles, though evolving, have remained consistent and across generations of socio-cultural agents.

3.2.3. Critical reflections on rhizomes

Although the concept of rhizomes is an interesting and useful analytical concept, it must be used with caution. Lawley (2005) sees danger in the openness of the concept. He refers, for instance, to Jackson and Carter (2000) who conclude from their investigation on organisational structures from a rhizomatic perspective that:

to talk about organizations as rhizomes is to say that they are, in fact, constituted by flows of desire, belief, micropolitics, micro-power which are unspecifiable, unpredictable and uncapturable and which may, or may not, lead to specific, predictable and identifiable outcomes. (pp. 252-253)

Such structural analysis, known as cumulative circular causation, is also applied by Myrdal (2009 [1944]) as a direct critique on equilibrium models; he also refers to economics, and applies this type of analysis to explain the prejudice of white towards black Americans in his social study *An American Dilemma*.

The scientific ideal is not only to define and analyze the [social] factors [of prejudice], but to give for each one of them a measure of their actual quantitative strength in influencing the other factors, as well as a measure of their ability to be influenced themselves by outside forces. (p. 1068)

Jackson and Carter (2000) use the rhizome as a metaphor while metaphors are generally criticized by Gilles Deleuze (Lawley, 2005). Furthermore, as Lawley (2005) says, the Jackson and Carter (2000) criticism of open-endedness may lead to an ontological singularity, where “there is the danger that the concept develops no further” (Lawley, 2005, p. 45). This ontological open-endedness is, amongst others, a reason for Sokal and Bricmont's (1999) rather polemic critique in their book *Fashionable Nonsense*. They basically argue that modern post-structuralists, like Gilles Deleuze, mix scientific and pseudo-scientific terminology resulting in incomprehensible nonsense and impose the readers with meaningless phrases. In particular, when well-defined scientific terminology is used in a metaphorical, philosophical context, the reader has difficulty understanding the topic. This is pointedly illustrated in Sokal's (1996) famous article *Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity*, in which he intentionally uses a nonsensical scientific argument to test for ideological biased favouritism of feminist and socialist terminology in philosophical articles. Such nonsense includes, for instance, his observation that “Western physical science has, since Galileo, been formulated in the language of mathematics. But whose mathematics?” He follows his question with a nonsensical answer.

A liberatory science cannot be complete without a profound revision of the canon of mathematics. As yet no such emancipatory mathematics exists, and we can only speculate upon its eventual content. We can see hints of it in the multidimensional and nonlinear logic of fuzzy systems theory; but this approach is still heavily marked by its origins in the crisis of late-capitalist production relations. (Sokal, 1996, pp. 242-243)

Further nonsense in his analysis of quantum gravity can be found in his discussion of a morphogenetic field, a pseudo-scientific term from the modern New Age esoteric movement. In contrast, Deleuze and Guattari (1987, 2004 [1972]) present terminology

such as codes, territories, segmentarities, plateaus, and desires, in such a way that their vocabulary is understandable to readers without good knowledge of a related scientific discipline. Indeed, they may remain hard to understand but other than, for example, Baudrillard's (1995) rather playful metaphorical employment of scientific terminology, which he uses to argue that the first Gulf War took place in a space that "has become a hyperspace with multiple refractivity, and that the space of war has become definitely non-Euclidean" (p. 50), Deleuze and Guattari's (1987, 2004 [1972]) vocabulary is, in fact, succinct and coherent, and useful for social economic analysis. Here Baudrillard (1995) is rightly criticised by Sokal and Bricmont (1999) because one is literally stuck in his understanding without the knowledge of what Euclidean and non-Euclidean spaces actually are. However, I argue that their critique does not apply to Deleuze and Guattari (1987, 2004 [1972]).

However, critical voices do question the concept of the internet as a rhizome. Roetzer (1999), for instance, describes hierarchical tendencies in the web structure due to the concentration of attention. This means, that the allocation of internet users is spread over a few websites only, and these sites automatically attract more users due to their popularity and reputation. Thus, there is an observable concentration on specific websites which reflects the hierarchical structure of the web and there are people who actively and intentionally try to dominate or capture the web. Such dynamics of domination are discussed by Galbraith (2004) in detail¹⁹. Google, for instance, is the number one search engine for most of internet users. Furthermore, Koubek and Lueber (2000) refer to the fact that top level domains are distributed by single institutions to illustrate that the web itself is not fully decentralized as a rhizome should be. Yet, they conclude that with a high level of abstraction the web can be best understood as rhizomatic. Moreover, Deleuze and Guattari's (1987, 2004 [1972]) primitive and rigid segmentarities, plus their lines of flight, allow an understanding of the development described by Roetzer (1999), who describes existing hierarchical structures and tendencies in the web.

In my opinion, Deleuze and Guattari's (1987) rhizomes are a useful approach to understanding and analysing communicative acts and hence, formation and change of preferences in relation to economics. Rhizomes offer a way of thinking and understanding social and cultural interactions based on communication that gives credit to the complexity of societies. However, due to their definitional open-ended nature and

¹⁹ See page 38.

definition as a mind map or school of thought, rhizomes need to be explained at a lower level of abstraction. Especially important is to fill the communicational acts with content that is closer related to the topic of this thesis and to add a bit more behavioural dynamic to the three segmentarity lines described above. The latter will be explicitly achieved through the application of the Berger and Luckmann (1966) model of social construction.

3.3. The social construction of reality

While Deleuze and Guattari (1987) explain the dynamics of their line segmentarities, Berger and Luckmann (1966) illuminatively explore the evolution of these lines. Yet, their model brings us back to a hierarchical understanding of the social world. Their model is closer to a concept Deleuze and Guattari (1987) call tracing and disapprove of. Indeed, Berger and Luckmann (1966) offer both an interesting definition for institutions, and a description of institutions' emergence and survival. Their view fits with the description of Dolsfma (2004), who sees institutions "as emergent properties that find their origin in the interaction amongst individuals" (p. 420). This view also correlates with that of Hodgson (2006), who writes that institutions are "systems of established and prevalent social rules that structure social interaction" (p. 2) and finally with the work of Dolfmsma, Finch and McMAster (2011) mentioned earlier, although they refer to the system theory of Luhmann (1995 [1984]).

Moreover, this debate has relevance as an economic and institutional explanation of preference emergence and change. Berger and Luckmann (1966) see social orders as the result of human behaviour, and they do not accept that there is any other valid ontological description. They understand the existence of social order as an inevitable result of "the inherent instability of the human organism" that "makes it imperative that man himself provide a stable environment for his conduct" (Berger & Luckmann, 1966, p. 70). Interestingly, Berger and Luckmann (1966) disapprove of the assumption that biological data or laws of nature are able to describe social order, yet these two things are important determinants for social order. As the quotation above shows, the authors refer to the biological imperfection of the human being that requires management in order to understand, survive and get along in the environment in which the human being lives.

The quote above also shows the authors' conviction that socio-cultural settings and institutions are part of survival patterns in human evolution, and how inherent human

nature creates a the division of labour (A. Smith, 1869 [1776]a, 1869 [1776]b) that adds a further evolutionary perspective and purpose for economic behaviour. Yet, these patterns of behaviour are not encoded in our genes and only arise through social interaction. Storr (2010) summarises the model as an explanations of how “human knowledge about the social world is created, transmitted, preserved and comes to be taken for granted by 'the man on the street' as he negotiates that world” (p. 200)²⁰. However, it is not only knowledge about the social world that is created and transmitted. Knowledge about the world in itself is the key to social interactions, since the human being must make sense of its complex environment in order to survive. Such a view point can also be found in feminist economics literature under the term social provisioning as methodological starting point (Power, 2004). Power (2004) concludes that social provisioning “illuminates the ways a society organizes itself to produce and reproduce material life” and that “this organization is a set of social activities, rather than individual choices, and its outcome is social production and reproduction, rather than individual happiness” (p. 7). Finally, the preservation of such knowledge is an important part of Berger and Luckmann's (1966) model and will be outlined in detail in the next sections.

3.3.1. Habitualisation and typification

The first stage in Berger and Luckmann's (1966) model is habitualisation, a term used to describe repeated actions that become habits, congruent with social habits or habits of thought mentioned by Veblen (1998 [1898]), Mead (1934) or Peirce (1931), while Nelson and Winter (1982) speak of *routines* or *routinised behaviour*. It is these authors' basic assumption that humans organise their behaviour into definable patterns. This is to some extent similar to the assumption that behaviour is based on communication. Communication itself becomes manifest in specific patterns, for instance a language with its semiotic structures. Searle (2005) writes that languages are fundamental social institutions and while “you can have language without money, property, government, or marriage, [other social institutions] (...) you cannot have money, property, government, or marriage without language” (p. 12). Habitualisation has even broader applications, because it does not require a social environment to be demonstrated. Berger and Luckmann (1966) illustrate the nature of habitualisation with the help of a “solitary individual on the proverbial desert island” (p. 71), whose daily survival is based on

²⁰ Certain similarities with Hayek's (1945) work in knowledge in society can be explained through the academic environment of Hayek, Berger and Luckmann in Austria.

habitual activities such as the ignition of a camp-fire. This activity requires several steps, from the collection of dry sticks, to mounting a pile, which that person does every day. In addition, habitualisation allows the simplification of operational procedures and thus implies psychological gain for individuals. In a social environment, the ignition of a campfire is a habit in itself; there is no need for a step-by-step description. Thus, the psychological gain of habitualisation is the “free[dom of] the individual from the burden of 'all those decisions'” and the “provi[sion of] the direction and the specialization of activity that is lacking in man's biological equipment” (Berger & Luckmann, 1966, p. 71).

The next important step in Berger and Luckmann's (1966) model is typification. According to them it occurs alongside habitualisation within a social context. For the lonely individual on the desert island, typification occurs when a partner with whom that person can interact with, is supplied. If A watches B igniting a fire, A will typify or classify the observed habit, bring it into a context and may be able to repeat it. Then, A is able to see B and automatically picks up the typification, understands the habit in itself, and the relation of B's action to their own actions. A similar reasoning is found in Smith (1761 [1759]), who uses this empathic implication of the human cognitive faculties to describe an impartial spectator in his *Theory of Moral Sentiments*. In addition, Mead (1934) recognises of a process of social differentiation that “is constituted by the responses of individuals to the identical responses of others” (p. 229); this process is a coping strategy used by an individual to establish the cooperation necessary for survival in a social organism. Likewise, England (1993) refers to the ability of empathy to explain interpersonal utility comparison, which is explained in more detail in the literature review²¹. Therefore, Berger and Luckmann (1966) conclude that “institutionalization occurs whenever there is a reciprocal typification of habitualized actions by types of actors” (p. 72).

3.3.2. History and control

The next two important contributions towards the understanding of what institutionalisation means are history and control (Berger & Luckmann, 1966). While the “reciprocal typification of habitualized actions” (Berger & Luckmann, 1966, p. 72) constitutes institutionalisation, the latter does not occur instantly. In fact, institutions are products of a historic, cumulative assemblage of typified and habitualised actions.

²¹ See page 24.

Furthermore, Berger and Luckmann (1966) assert that institutions can only be fully understood in their historic context. For example, the two individuals on the desert island, a hypothetical institution of camp-fires would occur only after the reciprocal observation of A's and B's behaviour. Although institutions today are defined by large social groups, Berger and Luckmann (1966) refer to the possibility that institutionalisation can occur even between just two individuals. As soon as institutions are established, they get control over human conduct. It is no longer typified habits that determine the context of an action; rather, it is the institution that instructs the participants how to act. Institutions become a kind of metaphysical entity that defines social rules, yet they arise from social interaction and evolve into a system that simplifies those interactions. Herein lies the first connection with the segmentarity lines by Deleuze and Guattari (1987), that determines, amongst other things, gender roles in social groups. These lines appear metaphysical as well, but might originate from a process of habitualisation and typification described by Berger and Luckmann (1966). It is trivial to assume that gender roles are socially constructed and have only a marginal relationship with the biology of humans. Alexander and Fisher's (2003) study on sexual activities and preferences, such as the number of sexual partners, masturbation, use of hardcore and softcore erotica, and fetishes, shows that women tend to lie more about their sexual profile than men rather than actually having less sexual partners or not being involved in any of the other activities. Socially, men and women experience a different evaluation of their sex life, while this has no real relation to the biological difference of their sexes. Colloquially spoken, an excessive sexual behaviour is inappropriate for women, while it is acceptable for men 'to sow their wild oats'. Alexander and Fisher (2003) explain this double standard well.

Gender expectations consistent with the sexual double standard may be responsible for heightening women's sensitivity to the degree of privacy or pressure to respond honestly more so than men's, especially in the exposure threat condition. Men have a history of enjoying and expressing sexual freedom, autonomy and liberation and therefore may be more comfortable than women expressing their sexuality on self-report measure. (pp. 32-33)

Thus, the institution is not only a typification of habitualized behaviour; it also outlines sanctions and punishments for acts that are diametrically opposed to established habits. Berger and Luckmann (1966) point out that as soon as an activity is institutionalized it is also socially controlled. Further mechanisms for sanction or punishment are usually

required only when institutionalisation is not fully completed. Berger and Luckmann (1966) describe a specific example of institutional punishment of beheading for the act of incest. Technically, this example is not different from the one about sexual behaviour of men and women, although the social punishment in the Berger and Luckmann (1966) example for misbehaviour is more severe. However, it is important to keep in mind that the institutional control of specific habits is not completely successful, and that specific behaviour can become a threat to institutional integrity. In these cases, excessive sexual behaviour and preferences by women, and the act of incest, are both threats. The bigger the threat the more likely real punishment will be applied. Yet, Berger and Luckmann (1966) conclude that “it makes little sense, therefore, to say that human sexuality is socially controlled by beheading certain individuals. Rather, human sexuality is socially controlled by its institutionalization in the course of the particular history in question” (p. 73).

The historic background of both cases has not been addressed so far. The ostracism of incest may have its historic roots in the negative biological results of inbreeding. Inbreeding causes the reproduction of genetically related mates, and leads to higher probabilities of physical and health defects, such as genetic disorders, weak immune systems and other observable physical abnormalities (Griffiths, Miller, Suzuki, Lewontin, & Gelbart, 2000). This could be one functional reason for the social ostracism of incest. In terms of gender-specific honesty about sexual behaviour the historic origin may require a more detailed evaluation of the history of the related socio-cultural institutions. By adopting Deleuze and Guattari's (1987) rhizome, in recognition that gender-related differences are part of a complex social system, we may find that the roots of this specific segmentarity line arise from other lines, which institutionalise different habits. This means that institutionalisation does not only occur as a “reciprocal typification of habitualized actions” (Berger & Luckmann, 1966, p. 72), it also occurs, with respect to the lines of flight (Deleuze & Guattari, 1987), as either a re-typification of already habitualised behaviour, or as an application of existing institutional settings in a new situation. For example, the social status of gender-related sexual behaviour may have arisen from other gender related typifications, such as patriarchal family structures that can be described as primitive and rigid lines (Deleuze & Guattari, 1987). Related studies about sexual behaviour and variation in preferences through cultural change are found in Malinowski (2001 [1927], 2005 [1929]). He describes how taboos, which developed within Pacific island societies, must be enforced through authority and repression, and what influence Western colonisation has had in terms of the re-

typification of existing primitive lines. Especially, Christianity enforced a religion contrary to the native beliefs of Pacific island societies and was spread with the help of authority and repression in order to suppress former existing religions.

3.3.3. Roles and Justification

The example of gender roles highlights the concept of assignment of roles in Berger and Luckmann's (1966) model. Their short description of the typification of habitualized actions is that "A watches B perform. He attributes motives to B's actions and, seeing the actions recur, typifies the motives as recurrent" (Berger & Luckmann, 1966, p. 74). As written above, A and B develop specific patterns of conduct, called habit typification due to reciprocal observations that in turn determines their roles. Yet, roles must be understood as typified habits in relationship to each other. Berger and Luckmann (1966) explain this mutual relationship succinctly.

B's role in the activity of preparing food is not only typified as such by A, but enters as a constitutive element into A's own food-preparation role. Thus a collection of reciprocally typified actions will emerge, habitualized for each in roles, some of which will be performed separately and some in common. (p. 74)

It is important to note that these steps occur before institutionalisation; institutions themselves are equipped with related roles. Furthermore, roles constitute a gain for both individuals. By taking a role, the actions of A become predictable for B, and vice versa. This automatically eases and secures the interaction between both individuals, as well as providing a division of labour and room for innovation that require a higher level of attention (Berger & Luckmann, 1966). This idea of specialisation is also supported by Smith (1869 [1776]a, 1869 [1776]b). From the simple process of creating a habit out of repeated actions, the social interaction of at least two individuals creates meaning through typification and the generation of roles in which both individuals can live and work together. This role creation process supports Berger and Luckmann's (1966) view that institutions provide a stable environment for human conduct.

Furthermore, the process of institutionalisation, as described above illustrates a interesting change of perspective on habits and roles. While in the beginning roles are defined by typification of habits, through institutionalisation individuals inherit the defined roles and act accordingly. This creates the first justification for the existence of institutions. Individuals may no longer be fully aware, that institutions are a result of their interactions, rather than stand-alone, constitutive entities. Berger and Luckmann

(1966) describe institutions as “the product [that] acts back upon the producer” and that “externalization and objectivation are moments in a continuing dialectical process” (p. 78). Myrdal (2009 [1944]) describes the same effects as cumulative circular causation. There are numerous examples of such institutions, political ideologies, languages, religions or markets. Storr (2010) argues that *The Social Construction of Reality* (Berger & Luckmann, 1966) offers an enriching perspective towards the market as an objective and subjective reality. In contrast to mainstream economics, he describes the market as not only “a series of conversations about prices and profits but also conversations between potential and actual friends” (Storr, 2010, p. 205). This insight is also picked up by Etzioni (2011) in his critique on neoclassical theory, that tries “to rationalize social bonds (family, friends, peers, communities) and social norms (the specifications of social and moral values)” (p. 1105).

The second justification for the existence of institutions, which Berger and Luckmann (1966) call legitimation, is based on the fact that “A's and B's activity remains fairly accessible to deliberate intervention by A and B” (p. 76). Thus, at, institutions prevail through a continuous justification, sometimes across generations, in the sense of “this is how things are done” (Berger & Luckmann, 1966, p. 77) or ‘this is how things have always been’. This means that A and B affirm the validity of their institutionalisation, both between each other, and for their offspring.

However, this legitimation is not perfect, as the evolution of institutions and social systems suggest. The reasons for imperfection may be found in the creative force of human desires, described above (Deleuze & Guattari, 1987, 2004 [1972]). There is usually tension, or conflict, between the human’s individual creative desires and institutional provision of stability. Berger and Luckmann (1966) claim that with institutionalisation, individuals create their own objective social reality that is distinguished from a natural reality. This implies that human desires actually mould and form stable characteristics of the social environment. Yet, the social world remains changeable (Berger & Luckmann, 1966). This imperfection, together with the creative desires, represents a starting point for the lines of flight defined by Deleuze and Guattari (1987). According to Grant (2003), it is important to acknowledge this imperfection. He criticises modern communication theories as inflexible in allowing for contingencies, something he sees as very important within the communication processes.

Grant (2003) further argues that “existing interactionist paradigms, referential semantics, bivalent vagueness theories or universal pragmatics cannot adequately

demonstrate the contingency” (p. 115), which is also a critique of Deleuze and Guattari (1987, 2004 [1972]) and Berger and Luckmann (1966). In fact, Thomas Luckmann's work is directly addressed in Grant's (2003) paper. However, the rhizomes, the social construction of reality and my hypothesis do not exclude contingencies in communication. On the contrary, if communicational acts were perfect, the evolutionary processes and changes of institutions and social orders would be impossible. For example, the development of legislative systems as socio-cultural institution can only be described by imperfection and contingency in the communication. Without imperfection and contingencies in legislative systems, there would be no need for the constant rewriting or legislation that On a more basic level, imperfections in communication can be described as noise (Shannon, 1948) or misinterpretation (Watzlawick et al., 1967). Noise in communicational acts leads to everyday misunderstandings in common speech, a common reason for imbalances in individual and institutional relationships.

In addition, Baecker (2005) demonstrates that imperfection is the very nature of communication, if complexity in communication is a given. According to him, communication is not just the transmission of context; it is rather a mutual selection within a scope of possibilities. The term selection implies that not only messages themselves are sufficient for an understanding of communication, their area of selection is also required “if one wants to talk about information and then also about the communication of this information” (Baecker, 2005, p. 11). He further introduces a contextual degree of freedom, a phrase he borrows from physics, to explain that variables are dependent on a system-context, but do allow communicators to specify contextual scope. This means that contexts in communication are never well-defined. Baecker (2005) compensates for contextual ambiguity by defining different forms of communication that are dependent on system-context, such as organisations, cultures, and networks. A network has heterogeneous elements and “consists not only of individuals and institutions or organizations (...), but (...) [also] of identities of various kinds, so that people relate to institutions, these relate to ideologies and these in turn to stories, in which those persons appear again or not” (Baecker, 2005, p. 228).

Baecker (2005) explains the characteristics of connection, heterogeneity and mutliplicity that are functional elements of Deleuze and Guattari's (1987) rhizome; therefore his definition of a network is very similar to the definition of a rihzome. Baecker (2005) describes identity and control as communicational forms of a network; identities are controlling and thus allow to control, and “therefore, networks consist of

successful as well as failed attempts of control” (p. 230). Therefore, imperfection in communication is intrinsic. I will further refer to the concept of identity later in the sub-chapter about social representations.

3.3.4. Second implications

In order to understand the implication of the social-constructed objective reality behind institutions, one must ask whether social order, or any institution, could exist without human beings. The simple answer is no. The individual perceives both social and natural realities as equally objective, because both are required for the survival. Yet, the latter did obviously exist before human beings and will continue to exist after our extinction (Storr, 2010). Berger and Luckmann (1966) conclude that the idea of institutions’ objectivity is kept alive by individuals, yet they forget the social and interactional origins of those institutions.

The world of everyday life is not only taken for granted as reality by the ordinary members of society in the subjectively meaningful conduct of their lives.

It is a world that originates in their thoughts and actions, and is maintained as real by these. (p. 33)

This process is also described as reconstructive downward causation in early works by Hodgson (2002, 2006), he now prefers the term reconstitutive downward effects in order to avoid any ontological confusion (Hodgson, 2011). “At the level of the human agent, there are no magical "cultural" or "economic" forces controlling individuals, other than those affecting the dispositions, thoughts and actions of individual human actors” (Hodgson, 2011, p. n.a.). As stated above, this is required for the individuals to concentrate their cognitive resources to more important problems.

Simon's (1957) concept of bounded rationality which highlights the limited cognitive resources available for decision making processes, further demonstrates the implications of Berger and Luckmann's (1966) conclusions on economics. By abandoning full awareness and control, institutions become metaphysical, i.e. a fundamental constituent of social reality that is justified and kept alive but not consciously planned by individuals.

Furthermore, Berger and Luckmann (1966) observe that as “the most important item of socialization, language appears to the child as inherent in the nature of things, and he cannot grasp the notion of its conventionality” (p. 77). However, this item of socialisation may not fully apply to adults. Adult humans are not fully aware of how

bound by convention their language is. However, for the English language William Shakespeare portrays a remarkable example of a singular person and his 'play' with the language. According to Crystal (2008) Shakespeare did not only introduce about 1,700 new words into the English language, his “graphology, phonology, grammar, vocabulary, and discourse organisation”, the language in his texts, contributed “to the historical development of the English language” (Crystal, 2008, p. 41). Yet, Shakespeare is a rare example about someone with such command of a language.

The concept of spontaneous order illustrates that complexity of markets cannot be based on planning (Hayek, 2003 [1968]; Storr, 2010). In fact, market structures are socially embedded (Etzioni, 2011; Granovetter, 2005). In contrast, planned orders show a “degree of complexity” which is “limited to what the human mind can master” (Hayek, 1973, p. 38). Ancient markets used to be specific places in cities or smaller communal centres. Modern markets are abstract and highly complex entities in which multiple agents interact. This abstraction is characterised by globalisation and anonymous interactions. The internet amplifies this abstraction to a point where markets are globally. In addition, Boykin (2010) emphasises the importance of spontaneous order and evolutionary processes in Hayek's analyses of economic and political systems.

The spontaneous order of markets originates in the process of unplanned institutionalisation of typified habits (Berger & Luckmann, 1966)²². This means that typification itself is and remains unplanned, there is no hierarchical structure determining it nor is there any kind of master plan behind institutions. Polanyi (2001 [1944]) emphasises spontaneous moves behind the formations of societies in his book *The Great Transformation*, too. He postulates a double movement by which the modern state rises conjointly with the development of modern market economies; he states that both need each other for various reasons, such as changing social structure, in order to establish capitalism. Ladyman, Lambert and Wiesner (2011) further define a complex system through disorder, robust order and memory. The market as an institution is characterised by the unsynchronised interaction between elements of disorder and the macroscopic stability of the system, which “means that although the elements continue to interact in a disordered way the overall patterns and structures are preserved” (Ladyman et al., 2011, p. 27). This scenario is known as the robust order and the maintenance of the system by its own internal structures is the memory. Thus, the intergenerational transmission of the institutions, e.g. the passing on of typified habits

²² Again, the similarities in the lines of thought of Hayek and Berger and Luckmann come from the common academic environment in Austria.

and roles to younger generations, is not sustained by global planning, but by the advantages such defined roles offer to individuals.

The Social Construction of Reality by Berger and Luckmann (1966) emphasises the importance of a historical perspective on social interactions between human beings for understanding the origin of social and cultural institutions. Berger and Luckmann (1966) describe it as a “paradox that man is capable of producing a world that he then experiences as something other than a human product” (p. 78). This paradox is further intensified by the complexity of social systems. Contrary to their own beliefs, institutions are not only formed by a few interacting individuals, but by many people. Moreover, institutions do not only originate from simple task-related habits, but from other conducts. A web of institutions arises through lines of flight (Deleuze & Guattari, 1987), or the reinterpretation of established typified habits and roles.

Berger and Luckmann (1966) also explain that different institutions are immune to changes of different degrees. That means that the better the institution is established through the described processes of institutionalisation, the less likely it will be open to changes. For example, from a historical perspective the socio-culturally constructed gender roles, which served as an on-going example so far, have been quite resistant to changes over centuries and still remain present in many cultures around the world in other words, patriarchy and male domination persist. Another example is religion that have established a high degree of contextual objectivity in Berger and Luckmann's (1966) sense, with strong ethical and behavioural determination. Likewise, economic markets show such an objectivity, as Storr (2010) observes and which Smith (1869 [1776]a, 1869 [1776]b) has labelled as the invisible hand. This self-regulation of markets is a characteristic of the interacting elements of a complex system that is not necessarily perceived by individuals.

3.4. Social representation

The theory of social representations by Moscovici (1988, 1994, 1998) is presented as a third conceptual framework that explains preference formation well. It offers a bridge between Berger and Luckmann's (1966) social construction of reality and Deleuze and Guattari's (1987) rhizome and it completes the theoretical synthesis. First, social representations can simply be seen as the result of the institutional process of the social construction of reality. Furthermore, similarities between all three theories arise from their similar scientific background. While Berger and Luckmann (1966) social

scientists, Moscovici (1988, 1994, 1998) is a social psychologist. He focuses on the communicational aspects of human interaction, in particular the semiotic aspect, and his idea can therefore be related to a rhizomatic understanding of communication.

3.4.1. What are social representations?

The theory of social representations stands in the tradition of Durkheim's (1997 [1893]) collective representation, which defines symbols as having a common meaning for members of social groups. A symbol also imposes its “influence on individuals and reinforces their reciprocal ties in a uniform way” (Moscovici, 1988, p. 218). Symbols can be objects, like the flag of New Zealand, or transcendental religious images such as the cross, the half-moon, or the star of David. However, according to Moscovici (1988), Durkheim's (1997 [1893]) concept lacks the ability to describe the generation and modification of those representations within social systems. For Durkheim (1997 [1893]) changes in social representations, expressed as symbols, are not common. In contrast, Moscovici (1988) emphasises a creative and continuing process of change that shapes and generates meanings, contents and tensions of social representations. Furthermore “a certain original diversity had to be taken into account and the emphasis shifted to communication” (Moscovici, 1988, p. 219) that allowed Moscovici (1988, 1994, 1998) to describe how individual thoughts can become something social.

Important to acknowledge are two different systems of knowledge, the scientific knowledge and the common sense (Moscovici, 1998), influence social representations, communication and symbology. Hayek (1945) points to “a body of very important but unorganized knowledge which cannot possibly be called scientific” (p. 521) to highlight the importance of common sense in the mix. Jacobs (2004) also defines social representations as “systems of social knowledge which summarize the content of common thinking” (p. 37).

The most important point to note that both systems of knowledge are not clearly separated. Through communication and the necessity for humans to make sense of their world, scientific knowledge is transformed into common sense knowledge (Moscovici, 1998). This particular process, or sense-making, is also emphasised by Berger and Luckmann (Berger & Luckmann, 1966), yet they point to the reciprocity of the construction of knowledge and social realities. Likewise, Purkhardt (1993) and Howarth (2006a) criticise the missing reciprocity in Moscovici's (1988, 1994, 1998) knowledge conceptions. I have discussed a parallel critique of Denzau and North's (1994) mental

models in comparison with Boulding's (1956) image²³. Purkhardt (1993) criticises that Moscovici (Moscovici, 1988, 1994, 1998) fails to "push his social thesis of knowledge to its logical conclusion" (p. 83) and observes that all knowledge is socially constructed. Potter and Ewards (1999) present another link to Berger and Luckmann (1966) by describing social representations as:

Primarily cognitive phenomena (although they are sometimes considered as cultural objects) which enable people to make sense of the world. The collective nature of this sense-making is taken to enable intra-group communication and to provide a technical definition of the boundaries of social groups. (p. 448)

In addition, Howarth (2006a) emphasises that social representations are not another description for attitudes, which are likewise an important concept in social psychology. Attitudes are understood as the response of individuals towards attitudinal objects, such as other individuals, or social entities and groups, and is seen as predetermined by those objects (Hovland & Rosenberg, 1960) Festinger (1985 [1957]) and Festinger, Riecken and Schlachter (2011 [1956]) demonstrate with their theory of cognitive dissonance, that attitudes and behaviour can, in fact, be contradictory. In their famous case study Festinger, Riecken and Schlachter (2011 [1956]) illustrate the behaviour of a small religious group after the prophecy of the worlds end at a specific date failed. Instead of admitting their failure, the group soon reinterpreted the event and said that the world was spared in order to spread their teachings further.

However, Howarth (2006a) refers to the critique of attitude theorists, because they see the individual as isolated, and do not conceptualise the social environment of the individual. In contrast, "rather than take the environment as something 'out there' which the individual responds to via certain sets of attitudes, individuals are seen to actively co-construct intersubjectively-agreed realities which constitute this environment" (Howarth, 2006a, p. 695). These social practises are the content of the theory of social representation.

Moscovici's (1988, 1994, 1998) theory can also be ontologically compared and linked with Berger and Luckmann's (1966), because their terminologies are congruent. Thus, the "co-construct intersubjectively-agreed realities" (Howarth, 2006a, p. 695), are interchangeable with the institutionalised and objective social realities described by Berger and Luckmann (1966). Moreover, due to those similarities *The Social Construction of Realities* (Berger & Luckmann, 1966) offers an enriching contemporary

23 See page 50.

framework for the evolutionary and dynamic interactive development of social representations. Moreover, social representations are institutions as described by Berger and Luckmann (1966), yet not all institutions are social representations. This is because social representations are limited to common sense knowledge, while Berger and Luckmann's (1966) institutionalisation involves i.e. science and its more specific knowledge systems. Nevertheless, due to the wide variety of definitions for institutions, a few have been presented in the literature review²⁴; it might be less confusing to use social representations as a synonym for institutions with yet a more distinct classification.

Howarth (2006a) mentions that the focus of social representations are the social practises and not the individual and their attitudes. Therefore, social representation theory deals with complexity by definition. In the following sub-chapters their advantages in light of the analysis of consumption preferences will be further developed. The general focus, in regard to, for instance, Dolfsma (2004), lies in the argument that the underlying social representations define status goods and consumer identities and as a result consumption preferences. Thus, social representations are an adequate theory choice for a detailed description of the socially constructed symbolism necessary for understanding consumption preferences. This shall be further explained in the following sections.

3.4.2. Exemplary description of social representations

In order to present a better understanding of social representations I will present some applications and descriptions of them from the literature. It can be said that social representations imply plenty of meaning towards attitudinal objects. Moscovici (1998) cites the disease AIDS as an example to explain this precept. He observes that the object, AIDS, relates to different social realities that have social connotations that go far beyond the disease itself. For instance, from a religious representation, and from the media widely communicated, AIDS is associated with a “punishment of God”, the “retribution of nature”, “degenerate behaviours” and “irresponsible sexuality,” while at the same time “there was also a series of publications arguing that the virus was manufactured by the CIA²⁵ for the extermination of undesirable population” (Moscovici, 1998, p. 210). Furthermore, social representations have had an influence on

24 See pages 34-37.

25 Central Intelligence Agency.

common language regarding AIDS; they “are embedded in the meanings of words and thus recycled and perpetuated through public discourse” (Moscovici & Marková, 1998, pp. 384-385). This is an extreme example but it shows why Moscovici (1988, 1994, 1998) generally makes the distinction between scientific knowledge and common sense systems. Overall, scientific knowledge is a search for truth by applying individual rationality while social representations find truth through dialogical rationality (Marková, 2003).

Economics is a system of scientific knowledge characterised by its logic, argumentative reason and specific terminology. The common sense, or folk-economics, is an unconscious understanding of why e.g. governments raise taxes or how money moves, yet there is no reasoning behind it (Moscovici, 1998). Common sense, as Storr (2010) remarks, in regard to Berger and Luckmann (1966), that knowledge is “taken for granted by 'the man on the street' as he negotiates that world” (Storr, 2010, p. 200).

Wagner (1998) describes the public funeral of Diana Spencer, Princess of Wales, in 1997 as the visible result of a collective representation which was formed during the year of her public presence. The Princess of Hearts, as the media called her, became a public symbol which influenced the global public perception of issues and topics associated with her. Wagner (1998) summarises the power of this particular representation as follows:

It affected public life in Britain like few other events; it occupied clearly identifiable channels of communication (...) it was not only talked about but the representation involved strong emotions and it was also acted out on an unprecedented scale; and it has the potential for unintended political consequences in the future. (p. 298)

However, Diana Spencer has never been a well examined case study in the *social representation* literature (Wagner, 1998) and therefore a complete understanding of this case remains unexplored so far. Some further discussions on her funeral can be found in mass-media and communication studies such as McMillan and Edwards (1999).

Wagner, Duveen, Themel and Verma (1999) present a rather substantial study on social representations regarding the image of mental illness and madness in India. The particular interest lies in the collision of traditional representations covering superstitious beliefs of causation and treatment, and the modern representations promoting scientific medical explanations and psychiatric treatments. At first glance, it seems that these two contradictory knowledge systems must exclude each other, but

Wagner et al. (1999) prove otherwise. Interestingly, the superstitious belief in ghosts and spirits causing mental illnesses, are replaced by a superficial scientific knowledge of psychology, Moscovici (1998) explains the development of common sense development from scientific knowledge, while “on the other hand, many of the Indian respondents express a deep faith in traditional healing procedures which contradicts their simultaneously expressed belief in scientific efficiency” (Wagner et al., 1999, p. 441). This being said, the Indian focus groups develop preferences for medical treatments both based on modern science and tradition.

The implementation of new knowledge systems depends on the social environment. In India, scientific knowledge is used in public, but the traditional knowledge system is found in family discourse. As Wagner et al. (1999) conclude, the family collective keeps preferences for traditional thinking and related health services alive. Hence, the assimilation of scientific knowledge systems, or the cognitive polyphasia, is not always successful as Wagner, Duveen, Verma and Themel (2000) show. Moreover, they refer to a case where a non-governmental organisation (NGO) introduced an AIDS campaign that failed when it was thwarted by with the local Indian social representation of sexuality.

The dynamics between different knowledge systems are further elaborated by Howarth, Foster and Dorrer (2004) in terms of community based health research, yet they present examples which are supportive for the purpose of this thesis. They refer, inter alia, to promotions for healthy nutrition, conceptualised as a healthy lifestyle. Interestingly, these promotions are “reinforcing a culture of ‘victim blaming’ and neglecting socio-structural determinants of eating behaviours” (Howarth et al., 2004, p. 233). This contradiction creates a negative tension within social groups in which it is no longer understood that ill health is a result of bad nutrition. Instead, the social representations generated victim-blaming promotions create an atmosphere of negative stereotypes. Although a low self-esteem is often linked with eating disorders in the scientific literature (Polivy & Herman, 2002), Howarth, Forster and Dorrer (2004) show that patients with eating disorders have a different comprehension of their situation.

Emma’s understanding of the problem is not focused on body dissatisfaction and self-esteem. Her experiences of being seen as ‘overweight’ bring to the foreground the judgements of others and the importance of social recognition. Her representations of eating behaviours are thus dialogically produced; that is the meaning of unhealthy eating is jointly constructed in response to a dominant

representation of weight as failure and bodily regulation as success. (p. 234)

It is clear that social representations not only transfer knowledge, but also carry associated values. Dolfmsa (2004) agrees by emphasising the importance of the social value nexus as an underlying concept for the for pop music preferences in the Netherlands.

other important implications of social representations are the creation of identity and its relationship with consumption preferences, also discussed by Dolfmsa (2004). However, firstly I will shortly discuss whether social representations can be understood as rhizomatic. I have defined complexity before²⁶ and argue that the exemplary cases by Howarth et al. (2004) and Wagner et al. (1999) illustrate the complex characteristic of social representations. Furthermore, the examples show the dependence on social interaction for the formulation and distribution of social representations. In particular, the paper about mental illness in India by Wagner et al. (1999) illustrates the complex fabric of social representations and their appearance in different social discourses. In fact, social representations can be seen as different context-dependent lines in a rhizomatic structure, as described by Deleuze and Guattari (1987). As described, individuals can adopt different rhizomatic lines depending in which context they operate within, e.g. the family, the school or the business environment. Finally, the Indian case also shows how different *plateaus*, in this case traditional and scientific knowledge systems, can emerge to create a mixed structure without a hierarchical order.

3.4.3. Social representations and identity

In order to explain the full scope of social representations and their influence on behaviour, especially in relation to consumption, it is necessary to discuss their implications in terms of one's individual identity. Dolfmsa (2004) not only shows that consumption preferences “take shape in a social environment that consists of interrelated institutions” (p. 88) but also that symbolic goods are create and allow change in people's identities. A similar reasoning can be found in Mead's (1934) symbolic interactionism who has been discussed in the literature review²⁷. Those symbolic goods, in Dolfmsa's (2004) case pop music, are important constituents in the evaluation and implementation of social interactions.

Lemke (2000, 2002a, 2002b, 2002c, 2008) understands identities as multiplicities and

26 See pages 52-55.

27 See page 14.

therefore contributes to the rhizomatic approach of this thesis developed with Deleuze and Guattari (1987). Therefore, Lemke's (2000, 2002a, 2002b, 2002c, 2008) identities are preferred instead Boulding's (1956) image. However, as earlier discussed, Boulding (1956) already developed an important understanding of identification which is a useful concept for economic theory as Kesting (2007) argues. Thus, it is legitimate to develop such an approach, too.

Lemke (2000, 2002a, 2002b, 2002c, 2008) proposes three different points in order to understand the development of identities. First, the diverse relationship of interactions in different social areas, for instance, age and gender, ethnicity, religion, institutions and more (Lemke, 2008).

Second, a scale-differentiated understanding of identities, in other words different layers, covering the stability of and influence on identities in terms of small time scale and small group issues as well as in terms of long-run institutional scales of lifetime development (Lemke, 2000, 2002c). This means that short-term trends modify identities in relation to in-group behaviour, while long-standing identities, e.g. nationality, remain unchanged. Finally, Lemke (2008) stresses the importance of human emotionality such as desires and fears, embodied in “subsistence needs, affordances for pleasure, and vulnerabilities to pain”. He stresses that “the phenomenological experience of unique selfhood overflows social semiotic categories, both structural and agentive, as we create feeling as well as meaning for ourselves” (Lemke, 2008, p. 18). This conclusion illustrates the boundaries of social representations, and the effects of brands’ symbolism on identities. Symbols, especially commercial ones, do not completely define individuals, however; it is possible for individuals to consciously create an identity. For example, the identity we portray in our social interactions differs from the notion of ourselves, yet “who we are, who we portray ourselves as being, who we are construed as being changes with interactants and settings” (Lemke, 2008, p. 19). However, a further discussion on the self shall not be given at this point. Instead, I may refer to related introductory literature by, inter alia, James (2007 [1890]), Taylor (1989) or Leary and Tangney (2012).

In summary, identities are enmeshed in the constructive and sense-giving processes of social representations and are adopted by individuals to form their lifeworlds (q.v. Habermas, 1990 [1985])²⁸. In other words, the habitualised roles we derive from social

28 Here, I may acknowledge PhD student Alwin C. Aguirre from the AUT Institute of Culture whose research on the discourse of identity of Filipino immigrants in New Zealand had an enlightening influence for my own examination of identities.

interaction (Berger & Luckmann, 1966) define our identities, or our lifeworlds. Furthermore, identities differ from the respective rigid and primitive lines (Deleuze & Guattari, 1987). For example, Lemke (2008) observes that we use different identities, or act differently, when we deal with children versus operating in a business environment. It may sound paradoxical, yet these identities allow separation from others, and identify us with others at the same time.

Dolfsma (2004) describes this dichotomy in terms of pop music as a symbolic good. On the one hand, he shows how pop music amplifies the conflict between different generations, and how youth use pop music to distinguish themselves from their parents. It is possible to say that they use the provocative and upsetting characteristics of pop music, and its messages, as lines of flight (Deleuze & Guattari, 1987) to reorganise or abandon traditional values in what Dolfsma (2004) calls his social value nexus. On the other hand, Dolfsma (2004) shows “the music gave young people other institutionalized means of communication” (p. 107), and helped them to form an identity of their own.

A similar process of distinction and identification is shown by Friedman (1990) and has been discussed in the literature review²⁹. Yet, his case emphasises the described process in terms of ethnicity and not in terms of generations. Taking Deleuze and Guattari's (1987) perspective, the new means of communication is a reorganisation of the rhizomatic structure towards new contextual *plateaus*. These allow the formation of new values, as well as a new re-evaluation of other themes such as expressions of autonomy and independence, or gender interaction (Dolfsma, 2004).

The same dichotomous dynamics of delimitation and identification can be found in terms of social representations in Howarth (2002). In her case study, she investigates social representations and identities of residents in the south London district Brixton. Howarth (2002) describes the district as a pool of multicultural ethnicities and identities that is highly stigmatised by both insider and outsider social representations. These representations evoke diverse and partly conflicting identities and emotional responses by individuals. Howarth (2002) sees young black women as positively affected.

[They] use representations of Brixton as a resource which with to construct alternative, more self-affirming representations that bolster a positive social identity. (...) Its strong black community, which has established a political identity as explicitly anti-racist, encourages awareness of black history and culture. By identifying with an area known for its resistance to oppression, some teenagers,

29 See pages 39-40.

often black girls, develop the self-awareness and the self-confidence to oppose racist images of black people. (p. 153)

Negative social representations about Brixton's black population are mostly rejected by them. Howarth (2002) describes that being black is automatically discrediting (Goffman, 1963). This situation is emphasised by "socially sanctioned value judgements" (Tajfel, 1969, p. 88), value judgements in regard to Dolfma's (2004) social value nexus, that label mostly young black males (Sewell, 1997) with stereotypes such as aggression, masculinity or animality (Hall, 1997). Thus, Howarth (2002) concludes that it is no surprise that young black males "have the most difficulty in rejecting such stigma and asserting a positive sense of self" (p. 152). Furthermore, she explains that in order to avoid being labelled by those negative social representations people dissociate themselves geographically from Brixton by saying that they live in neighbouring districts (Howarth, 2002).

Based on these examples, the conclusion that social representations have a significant role in the construction of identities is highly justified, although the exact nature of the impacts is case specific. Diverse identities must be examined in each case respectively. From this point it is now possible to discuss consumption preferences in detail.

3.5. Synopsis and consumption preferences

To begin with, I have argued earlier that Moscovici's (1988, 1994, 1998) social representations and the social construction of reality by Berger and Luckmann (1966) are ontologically homogeneous and comparable in terms of terminology. I also argued that social representations are institutions following Berger and Luckmann (1966), yet not all institutions are social representations. Furthermore, defined as systems of knowledge (Moscovici, 1988) it is possible to see similarities with other definitions of institutions discussed in the literature review, for instance "habits of thought" by Veblen (1998 [1898], p. 412), "coordinating mechanisms between the individual" by Potts (2007, p. 342) or "durable systems of established and embedded social rules" by Hodgson (2006, p. 13). Moreover, social representations constitute value systems which Dolfma (2004) describes as social value nexus. Finally, the underlying fact of communicational exchange must be considered, another well-known characterisation is the social discourse by Habermas (1987). I argue to understand these discourses as rhizome due to the contextual complexity the participants face in social discourses (Habermas, 1987), or codes and territories (Deleuze & Guattari, 1987). Furthermore, the

rhizome meets the requirement of a pragmatic approach towards communication and it allows showing the process of evolving social representations in continuing public discourses, demonstrated by examples above. Dolfsma (2004) emphasises several times the importance of symbolism of goods and their evaluation in relation to consumption preferences. The underlying semiotics are based on thinking, evaluation and action and highly dependent on related knowledge systems (Weitzmann, 2009). Thus, it is reasonable to put social representations, defined as social knowledge systems, in conjunction with symbolism of consumer goods, considering them as necessary for the processes required to develop such semiotic symbolisms. I will elaborate this further.

First of all, Scherer (2005) defines preferences as “relatively stable evaluative judgments in the sense of liking or disliking a stimulus” (p. 703). In economic terms, the stimulus is a consumable good or service and it is necessary to find the dynamics of how those evaluative judgements develop. I argue here that these judgements of goods and services are not fully intrinsic, but are constituted through the social representations individuals are confronted with in their lives. By adopting identities provided by social representations the individuals feel themselves belonging to specific social groups whereupon they accept group-related values and conducts, which is also used to delimit oneself from others as described by Dolfsma (2004), Friedman (1990) and Howarth (2002). However, depending on specific contexts and their identities, and consequently the social representations, individuals may change their values and behaviour as described by Lemke (2000, 2002c, 2008). This can also be explained by how far the habitualised typifications have been legitimatised (Berger & Luckmann, 1966). Therefore, it is necessary to examine social representations to determine whether they are primitive/rigid lines or lines of flight in a rhizomatic perspective (Deleuze & Guattari, 1987), in order to understand how sustainable the provided identities are. Durability of identity also has a direct influence on whether preferences are fluid, temporary trends or durable, stable evaluative judgements.

Following the claim of this thesis, it must be acknowledged that the stimuli Scherer (2005) discusses are not confronted by the evaluative judgements untouched, but instead originate within social representations. This may also facilitate a predictive examination of stimuli and in terms of their evaluation, even though very limited. In order to explain this further it is necessary to resort to the vocabulary of Deleuze and Guattari (1987, 2004 [1972]). The intensity with which individuals respond to stimuli depends on the unintentional or intentional constitution how well stimuli satisfy

underlying desires, assist lines of flight or fit into primitive/rigid lines. Stimuli such as the pop music in Dolfmsma's (2004) case study are a case in point. Since pop music provides a new means of communication by abandoning traditional means and re-organises group-related conducts, it is reasonable to assume that pop music arose from strong desires of members of society with established social representations to build a social representation in opposition to the established one. Yet, pop music remains connected to traditional representations to some degree. Adorno and Simpson (2002 [1941]) sum up the consequences well when they conclude that pop music establishes “a system of response mechanisms wholly antagonistic to the ideal of individuality in a free, liberal society” (p. 442). However, pop music had to satisfy a highly significant characteristic of established social representations in order to be successful. This is the “natural language for the American listener [which] stems from his earliest musical experiences, the nursery rhymes, the hymns he sings in Sunday school, the little tunes he whistles on his way home from school” (Adorno & Simpson, 2002 [1941], p. 444). At this point it must be said that Adorno and Simpson's (2002 [1941]) further conclusions, especially Adorno's, are very extreme. Although the quotes given above represent an adequate description for the point made here, Adorno's general antipathy against popular music, Jazz music in particular, and his critique on popular culture shall not be supported nor further discussed. This being said, pop music in general created a complex rhizome with multiple plateaus representing the different genres we know today (c.f.e.g. Frith, Straw, & Street, 2001).

Certainly, not all stimuli show such an intensity as pop music does. In fact, it seems more likely that most stimuli either serve to assist of existing lines of flight or fit into primitive/rigid lines (Deleuze & Guattari, 1987). For instance, an ordinary brand of butter will definitely not provide the same means of communication pop music as shown by Dolfmsma (2004). However, a preference towards consuming the stimulus (butter) may be achieved by fitting into social representations and as a consequence will be positively absorbed into the related *identities*. In preparation for the following case study which will discuss this point further it may be illuminative to review the differences between the natural objective and the socially constructed objective reality introduced by Berger and Luckmann (1966).

Accordingly, the content of the social representation of a stimulus, the equivalent to social reality, is certainly semi-independent from objective reality. The Auckland University of Technology (AUT) itself demonstrates the meaning of this. It is

reasonable to assume that there are certain social representations covering a university in general and AUT specifically. One representation may state, for example, that AUT is an institution of higher learning and research in Auckland, New Zealand. Although true, this representation also applies to other universities in Auckland. Moreover, as long as AUT remains in Auckland it can be located literally everywhere. Indeed, buildings are required to fulfil the function of an institute of higher education; however, the current physical address is not necessary for this purpose. Furthermore, as a university with a broad field of studies, AUT conforms with various evaluative judgements of underlying social representations. The university offers desirable, prospective identities for their students in terms of social status in relation to achieved degrees that induces positive evaluative judgements. In addition, a student has at least one identity created through social representations (Howarth, 2002) and consequently communicates in a way that allows self-identification and delimitation as illustrated via the studies of Dolfsma (2004) and Friedman (1990). Thus, referring to the case of Howarth (2002) the only differences between the student and the resident of Brixton are contextual while the processes behind internal and external social representations shaping the identities are the same.

In the end, Deleuze and Guattari (1987) suggest to literally draw a map of the rhizome to fully understand the semiotic chains of communication and the underlying symbolism of stimuli (Dolfsma, 2004). In order to do so and to summarise this chapter, I refer to an illustration by Ngui (2008) who did some artwork related to Deleuze and Guattari's (1987) work (Figure 6).

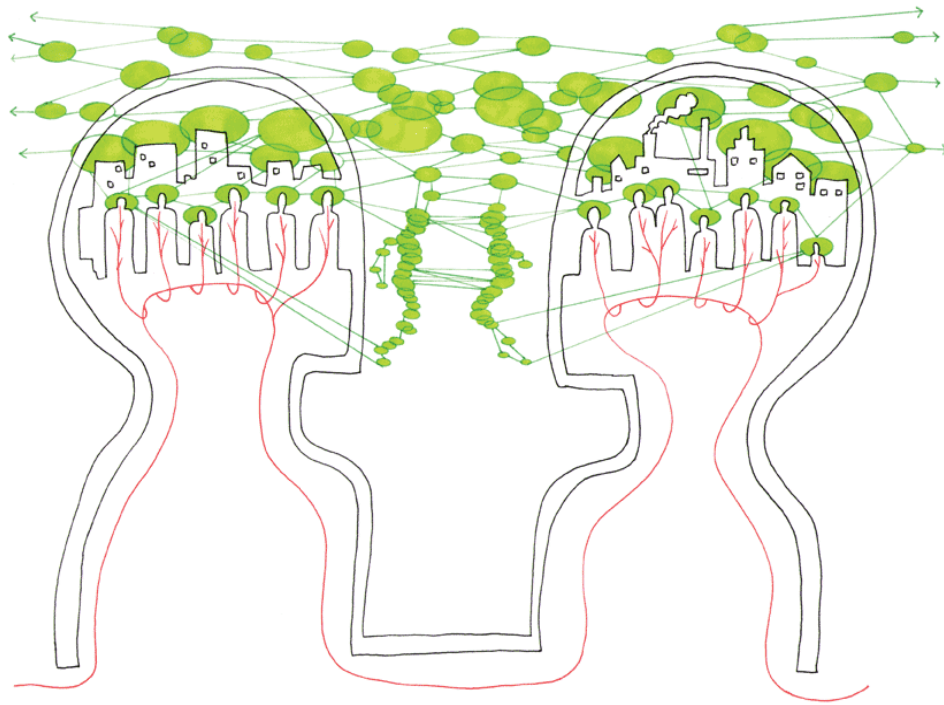


Figure 6: Diagrams of Deleuze & Guattari's A Thousand Plateaus (Ngui, 2008).

To understand consumption preferences, and evaluative judgements triggered by stimuli (Scherer, 2005), it is necessary to grasp complex, rhizomatic communication with its semiotic chains of codes, territories and desires, primitive, rigid lines and lines of flight (Deleuze & Guattari, 1987). It is also necessary to understand the evolution and implementation of underlying social representations (Moscovici, 1988, 1994, 1998) and their evolutionary processes of development and implementation (Berger & Luckmann, 1966). These concepts are illustrated in Figure 6. The different identities symbolised in the minds of the two bigger figures, their relationship with their environment, and their connection to the underlying social representations, and the semiotic chains of communication are represented in this drawing (Deleuze & Guattari, 1987). Thus, the following case study will deductively examine a specific and small stimulus in order to support this conclusion.

4. Bionade Case Study

The softdrink producer Bionade Corporation and its product Bionade offers a perfect example for a case study to test the validity of my theoretical synthesis. To begin with, a methodological clarification is given to explain the purpose, advantages and limitation of the case study at hand.

4.1. Methodological justification for case study research

Earlier in the theoretical synthesis a methodological reasoning has been provided referring to, inter alia, Heilbroner and Milberg (1995), Turk (2009) and Earl (2011). The main argument of this thesis is that reflexive social science methods are beneficial for economic theory; this argument has been based on evidence from a variety of case studies in economics and other social sciences (Dolfsma, 2004; J. Friedman, 1990; Howarth, 2002, 2006a; Howarth et al., 2004; Wagner et al., 1999).

I will use “an embedded, single-case study” (Yin, 2011, p. 7) for the purpose of this thesis. An embedded single-case study contains a single case with at least two embedded units of analysis. Sub-unites allow further explanation of the case from different perspectives, yet “the pitfall that novice researchers fall into is that they analyze at the individual subunit level and fail to return to the global issue” (Bexter & Jack, 2008, p. 550). However, this can be avoided by a careful analysis of the data (Bexter & Jack, 2008; Yin, 1984, 2011). Yin (1984) further defines a case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.” (p. 23).

This being said, it is clear that the case study represents an adequate methodology, that supports the theoretical synthesis’s claim for context-related examination of reciprocal social and economic phenomena.

However, there are certain critical points raised about the use of case studies as research method. Flyvbjerg's (2006) supports the use of a case study by refuting five commonly-held misconceptions about the case study research, summarised below.

- (a) Theoretical knowledge is more valuable than practical knowledge;
- (b) one cannot generalize from a single case, therefore, the single-case study cannot

contribute to scientific development; (c) the case study is most useful for generating hypotheses, whereas other methods are more suitable for hypotheses testing and theory building; (d) the case study contains a bias toward verification; and (e) it is often difficult to summarize specific case studies. (p. 219)

Considering point (a) on the list, he refers to the context of human learning to correct the idea that theoretical knowledge has more value than practical knowledge. First of all, case studies present context-dependent knowledge necessary to achieve a level of expertise in any field. He emphasises the importance of experts' practical experience with cases as central to scientific development, "it is only because of experience with cases that one can at all move from being a beginner to being an expert" (Flyvbjerg, 2006, p. 222). His second point is that in the social sciences, and therefore in economics, context-independent knowledge does not exist, and predictive theories explaining human affairs cannot be found. As a consequence, this also means that a purely deductive scientific approach is impossible. In conclusion, "concrete, context-dependent knowledge is, therefore, more valuable than the vain search for predictive theories and universals" (Flyvbjerg, 2006, p. 224). In addition, Jackson (2011) refers to issues of pure inductive and deductive reasoning in terms of case studies, which he sees as contra-productive in complex environments. Thus, he suggests an abductive logic, as found in Peirce (1931), "which is 'generative' in the sense that it leaps beyond available (usually insufficient) data to generate a new and better model" (p. 150). Considering the approach of this thesis, a detailed discussion on deductive and inductive reasoning can be found in the methodological justification in the theoretical synthesis.

Point (b) refers to the inductive ability of case study authors to generalise. The conclusion that a generalisation of context-dependent knowledge from case studies has no scientific value is true, but only at first glance. For instance, a case study can act as a *reductio ad absurdum* for a general theory, which is well known in maths as a proof by contradiction. Thus, a case study can be used to show the logical inconsistency of a hypothetical and generalised claim (Popper, 2002 [1935]). Flyvbjerg (2006) argues for the use of case studies to demonstrate falsification in the same way. He also adds that formal generalisation is overestimated "whereas "the force of example" is underestimated" (p. 228) in terms of scientific development. This means that although knowledge gained by case studies cannot be formally generalised, it can still be implemented into the broader scientific discourse. McCloskey (1983) argues the same point as Flyvbjerg (2006) from an economic standpoint.

[Economists] claim to be arguing on grounds of certain limited matters of statistical inference, on grounds of positive economics, operationalism, behaviorism, and other positivistic enthusiasms (...) but in their actual scientific work they argue about the aptness of economic metaphors, the relevance of historical precedents, the persuasiveness of introspections, the power of authority, the charm of symmetry, the claims of morality. Crude positivism labels such issues "meaningless" or "nonscientific" or "just matters of opinion." (McCloskey, 1983, p. 482)

Although exemplary circumstances are implemented into the argumentation, their real values are dismissed by the economic positivists. McCloskey (1983) identifies the reason behind this contradiction as the lack of methodological introspection in economics because "economists are extremely hostile towards questionnaires and other self-descriptions" (p. 514). This shows how economists underestimate "the force of example" (Flyvbjerg, 2006, p. 228), yet depend on examples.

A similar perspective is given by Yin (2011) who differentiates between statistical and analytical generalisation. What Yin (2011) describes as a case study involves small sample sizes and is analytical in nature. According to Yin (2011) "analytic generalizations depend on using a study's theoretical framework to establish a logic that might be applicable to other situations" (p. 18). By referring to a case study by Allison and Zelikow (1999) about the Cuban missile crisis, Yin (2011) explains his point. Instead of giving generalisations about the use of nuclear missiles, or the US Cuban diplomatic relationship, Allison and Zelikow (1999) "use their theoretical propositions to generalize their findings to the likely responses of national governments when involved in superpower confrontations and international crises" (Yin, 2011, p. 18). Furthermore, Bennett and Elman (2006) add that "Charles Darwin's study of a few species on the Galapagos Island" (p. 462) is a renowned case of an analytical generalisation, that resulted in the theory of evolution.

Following these arguments, Flyvbjerg (2006) continues with point (c), which is interrelated with the misunderstanding highlighted in point (b). To support his argument, he presents a wide set of strategies that use case studies as critical cases to "achieve information that permits logical deductions of the type" or paradigmatic cases which "develop a metaphor or establish a school for the domain that the case concerns" (Flyvbjerg, 2006, p. 230). Thus, depending on the selection of one's strategy, a case study can be suitable for generating and testing hypotheses.

The solution for misunderstanding (d), Jackson (2011) describes it as “retrospective distortion” (p. 149), is also achieved through the confutative ability of case studies. Thus, a case study is biased towards falsification rather than verification. Flyvbjerg (2006) even concludes that “the case study contains no greater bias toward verification of the researcher’s preconceived notions than other methods of inquiry” (p. 237).

Finally, misunderstanding (e) claims that case studies are hard to summarise and generalise. According to Flyvbjerg (2006), this is true to some extent; however, the truth of this is dependent on the specific case studies examined. Furthermore, it is “often not desirable to summarize case studies” (Flyvbjerg, 2006, p. 241). In the end, case studies must be seen as narratives which are necessary to keep traction in the world, as Turk (2009) argues. Another perspective of this specific issue can be found in Jackson (2011). He warns to summarise case studies in the way, that they present singular or independent problems, although they arise from complex situations with problem-orientated interdependencies.

Zainal (2007) points to the length of case studies. Especially longitudinal or ethnographic studies require a massive amount of documentation and are therefore hard to conduct. However, in-depth case studies have the ability to unite quantitative and qualitative data, a strength that outweighs perceived weaknesses.

In addition, Easton (2010) criticises the critical realist viewpoint in order to clarify epistemological concerns regarding case studies. He summarises critical realism by means of eight characteristics in reference to Sayer (1992). These characteristics are namely (a) “the world exists independently of our knowledge”, (b) “our knowledge of the world is fallible and theory-laden (...) nevertheless knowledge is not immune to empirical check, and its effectiveness in informing and explaining successful material practice is not mere accident”, (c) “knowledge develops neither wholly continuously, as the steady accumulation of facts within a stable conceptual framework, nor discontinuously, through simultaneous and universal changes in concepts”, (d) “there is necessity in the world”, (e) “the world is differentiated and stratified, consisting not only of events, but objects, including structures, which have powers and liabilities capable of generating events”, (f) “social phenomena such as actions, texts and institutions are concept dependent”, (g) “science or the production of any kind of knowledge is a social practice (...) knowledge is also largely—though not exclusively—linguistic, and the nature of language and the way we communicate are not incidental to what is known and communicated” and (h) “social science must be

critical of its object. In order to be able to explain and understand social phenomena we have to evaluate them critically” (Sayer, 1992, pp. 5-6). At this point I will not discuss each point in detail but it is reasonable to say that most of the points are consistent with what is outline in the theoretical synthesis. Thus, I may refer to Easton's (2010) epistemological justification for the case study method for my own benefit. The emphasis lies here in the understanding that social reality is constructed, thus contrary to social constructionists the critical realists acknowledge the existence of an objective natural reality. At this point, I refer to the distinction between social and natural objective reality described by Berger and Luckmann (1966) to recapture the standpoint of this thesis. Social phenomena bear a meaning which needs to be interpreted according to Sayer (2000); “meaning has to be understood, it cannot be measured or counted, and hence there is always an interpretative or hermeneutic element in social science” (p. 17). Finally, the tension between the observation of social phenomena, the underlying empirism and its interpretation, makes observations, in conclusion, both fallible and epistemic valuable for the scientific discourse (Easton, 2010). In other words, case studies contribute towards the process of generating scientific findings even if on the same subject interpretations can differ widely due to depending on the particular researcher.

Considering this short discussion on the case study research method, it is necessary to identify and to define the purpose of the case study on Bionade for this thesis. A major issue is the bias inherent in many case study designs as mentioned by Flyvbjerg (2006); however, this is often overstated as Bennett and Elman (2006) conclude.

The Bionade case study presented in support of this thesis is based on a wider theoretical framework that could amplify the bias. However, in reference to Yin (1984, 2011) this case study serves as a justification for an analytical generalisation of the underlying theoretical framework. Instead of being a falsification as Flyvbjerg (2006) argues, following Popper (2002 [1935]), the Bionade case study is a step in the abductive reasoning defined by Peirce (1931), and therefore deductive in the beginning. For further clarification I may refer to Bush (1991) and his description to overcome an infinite logical regression in scientific inquiry, as I did in the methodological justification of the theoretical synthesis³⁰. The theoretical synthesis represents his first point that “on the basis of prior inquiry, a value judgement is made in the selection of a standard of judgement (value)”, while the case study represents the second point: “the

30 See pages 50-52

standard of judgement (value) is applied in a valuation” (Bush, 1991, p. 334). After that, the deductive statements at the end of this thesis reflect the acceptance which finally allows future valuations of the suggested theoretical synthesis. This means that the role of the Bionade case study is to legitimise the underlying theoretical framework as valuable in a wider scientific context and neither as a final falsification nor as material for further inductive reasoning.

4.2 The Bionade case

The Bionade Corporation has been a popular subject in the management and marketing literature, such as Wittberg (n.d.), Wittberg and Vieselmeier (2008) or Dold and Kreeb (n.d.). However, an examination of the Bionade case study from an institutional economics perspective has never been done before, but promises to offer interesting insights. To approach the Bionade case from this perspective, I examine the theoretical phenomena that define Bionade and the real-world context simultaneously, as recommended by Yin (1984). However, the real-world context is limited to a general overview, because detailed of all underlying social representations in Germany and their history, would require an extensive analysis beyond the scope of this thesis. For the purpose of this case study, a semi-structured interview with a Bionade Corporation (2012) representative was conducted to gather further insights into the case (Appendices 1-3).

4.2.1 A general and historical overview of the Bionade Corporation

The Bionade Corporation was founded in 1995. It originated from a small Bavarian brewery in Ostheim vor der Rhoe, Germany, which has been family-owned by the related Leipold and Kowalsky families for several generations. It took its inventor, master brewer Dieter Leipold, eight years and approximately 1.5 million Euro of private and loaned money to develop the recipe and brewing process for the soft drink called Bionade (Baraskova, 2010). He “found a way to ferment a nonalcoholic drink by converting the sugar that normally becomes alcohol into nonalcoholic gluconic acid” (Treumann, 2007, p. n.a.). This bio-technical invention made Bionade a unique product. Due to financial reasons a joint venture with Rhoensprudel, a geographical close beverage manufacturer, was agreed upon in order to repay loans borrowed for the technological invention and to build the brand, sales and distribution. However, the Bionade Corporation lacked sales force and there was still not sufficient money for

major marketing efforts, campaigns and brand promotion which was one reason for minor distribution until 2000. In this year, the Bionade Corporation initiated a new marketing strategy after marketing expert Wolfgang Blum joined the company. The idea was to transform Bionade into a prestige product for the “LOHAS (Lifestyle of Health and Sustainability Generation)” (Baraskova, 2010, p. 33) despite limited financial resources. A detailed description of the marketing strategy used by the Bionade Corporation follows later. However, the marketing strategy was successful, and distribution increased across Germany, as shown in Figure 7. Later, the soft drink entered other markets in Europe. Bionade was included in the product ranges of strong new partners such as Deutsche Bahn, McDonalds and Starbucks, which accounted in part for Bionade’s success. The success also triggered Coca Cola to approach Bionade Corporation with a take-over bid in 2004, which was declined at that time (Baraskova, 2010). Instead, Bionade Corporation made plans to enter North America and Japan in 2008 (Treumann, 2007). Figure 7 shows the quantity of sales of Bionade between 2001 and 2011, while Figure 8 illustrates the geographical distribution of Bionade in Germany based on sales in 2008. Figure 8 shows where Bionade was most popular in that year.

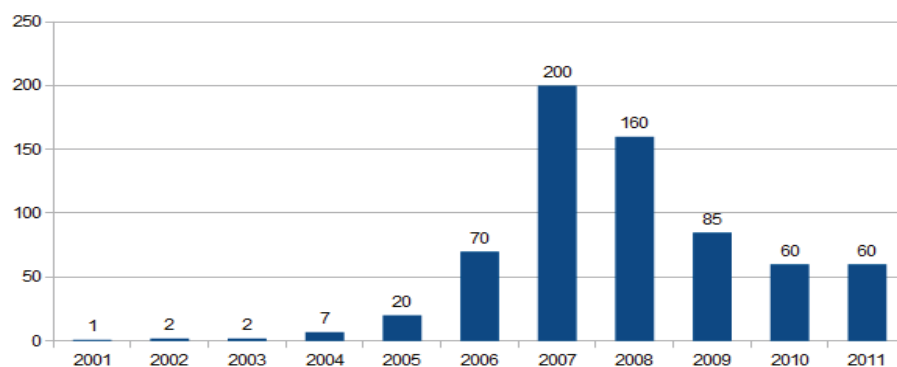


Figure 7: Approximate Bionade sales figures (quantity in millions), as collated from Wittberg (n.d.), Dold and Kreeb (n.d.) and Burger (2012).



*Figure 8: Geographical distribution of Bionade sales in Germany in 2008
(Dold & Kreeb, n.d.)*

By 2008, Rhoensprudel left the joint venture and the shares were bought by the Radeberger Gruppe, the beverage division of the Doktor Oetker Corporation, with a final majority stake of 70% for the Radeberger Gruppe and 30% for the Bionade Corporation. In 2010, the Bionade Corporation increased its advertising by using social media tools, and thereby established a more direct consumer communication which has been rather moderate before. In February 2012, owners Peter and Stephan Kowalsky sold their remaining shares and the Bionade Corporation now belongs completely to the Radeberger Gruppe (Bionade, 2012).

4.2.2 A view on Bionade from the stance of the theoretical synthesis

In the theoretical synthesis the definition of consumption preferences is based on Scherer (2005), who writes that consumption preferences are “relatively stable evaluative judgements in the sense of liking or disliking a stimulus” (p. 703). According to Peter Kowalsky, former owner of Bionade Corporation, “Bionade is a totally idealistic product. Of course we want to make money, but honestly, this was an attempt to give people something better” (Kowalsky as cited in Treumann, 2007, p. n.a.). Thus, the evaluation of the Bionade stimulus is not limited to its technical characteristics, such

as colour, and taste, but also encompasses an underlying ideal. Idealism implies certain values, and these cannot other than originate from existing social representations (Moscovici, 1988, 1994, 1998), evolving lines of flight (Deleuze & Guattari, 1987). This idealism is both embedded in, and a result of these processes that form social representations and lines of flight.

Evidence of this embeddedness can be found in the motivation of Bionade's invention (Bionade, 2012). As master brewer, Dieter Leipold has substantial professional knowledge about production processes of beverages, and was dissatisfied with the amount of artificial additives in soft drinks, which he perceived as harmful for children. Furthermore, the fermentation process for Bionade originates from beer production, which is regulated by the German purity law, so in it makes that "one of the goals was to make a drink for children that did not have any artificial additives and that followed the purity requirements traditionally used to make beer" (Leipold as cited in DME, 2007, p. 1).

First introduced in 1516 in Bavaria, the purity law enforced a set of standards for beer production in order to control price competition. However, over the centuries the purity law itself developed a certain social value of quality amongst brewers, consumers and other parts of society in Germany (Barlösius, 2011). Thus, the purity law is no longer a simple economic policy, but is part of a social representation, which shows a historical process of habitualisation and justification as described by Berger and Luckmann (1966).

That being said, it seems to be a legitimate interpretation that the Bionade innovation itself originates from such existing social representations. By applying the terminology of Deleuze and Guattari (1987, 2004 [1972]), the innovation finds its foundation in a desire, because Bionade is based on a production process that does not use artificial additives, something Dieter Leipold and potential customers desired³¹. This desire initiates a reorganisation of the social rhizome. The same perspective can be applied on the customers' negative position towards artificial additives in soft drinks. As written in the theoretical synthesis, social representations help individuals to make sense of the world they live in. Yet, the advent of artificial additives and new food chemistry creates a world in which "we can no longer identify, quantify and foresee the evolution of matter since new, original products are continuously being created" (Gervais, 1997, p. 80). What follows are social representations which contain negative views, whether they

31 See pages 61-62.

are justified or not, in order to keep a simple and manageable understanding of the world for the individual alive.

A powerful example of such social representations can be found in the discourse of academic and alternative medicine and the therein embodied conflicts³². Herein, the justification for the alternative medicine representation also lies in the declaration that conventional medical treatments are harmful for the human body. As Tuomainen, Elo and Myllykangas (1995) explain, the underlying desire for better health caused the development of two conflicting concepts of medical treatment; alternative medicine promotes natural resources without any artificial additives on the one and criticises conventional medicine on the other side. This social representation has played a role in the creative process behind the invention of Bionade, and also in its success in a society that favours alternative health treatments.

Finally, Bionade's technical production processes provoked a change in a rhizomatic structure not necessarily related to the brand at all. According to Dold and Kreeb (n.d.), Dieter Leipold had problems with gaining accreditation by regional authorities because the fermentation of non-alcoholic drinks was not defined at that time. As mentioned in the theoretical synthesis, Berry and Pawlik (2008) speak of faulty code in jurisprudence as an example. In the case of Bionade the code of governmental regulations regarding the specific production technology and related patent issues did not cover beverage production and therefore did not regulate Bionade; thus, regulations had to be rewritten or restructured (Deleuze & Guattari, 1987). Although, most of the brand's influence is related to social representations, this example shows that other institutions were affected as well.

That being said, it is more related to the research question of this thesis to examine the Bionade success story based on as a process of adopting, creating, and changing social representations within a rhizome. In its early days, Bionade Corporation did not have sufficient financial assets to initiate far-ranging marketing campaigns. Therefore, the company focused on promotion at sport and school events, and in health clinics (Dold & Kreeb, n.d.). It was the company's attempt to use word-of-mouth marketing to spread the product.

The Bionade Corporation's success also rests on the fact that it created a new market segment before wellness drinks became a trend in Germany (DME, 2007), and therefore

32 Which is partly a Western phenomenon, however the case study by Wagner et al. (1999) and the general discussion on social representation on pages 85-86 built on a wide range of illustrative examples including its dynamics in other societies, too.

initial sales were low. One of the reasons why wellness drinks were not a trend is the slow development of the underlying social representation of the “health-conscious consumers” (D. G. Smith, 2007, p. n.a.). Although fitness and wellness trends developed in the late 1970's and 1980's, they were only affordable to wealthy members of society until the end of the 1990's, when the trend became more popular in the middle-class society. This change of social representations was accompanied by a public and political awareness of the dangers of increasing obesity in Germany between 2000 and 2004³³ (Figure 9) (Sacavém & Correia, 2009).

Year	West			East		
	Overweight	Obesity	N	Overweight	Obesity	N
1991	14.8 (13.7 to 15.9)	3.6 (3.0 to 4.2)	3677	10.0 (9.1 to 11.0)	2.1 (1.7 to 2.6)	4001
1992				11.6 (10.3 to 13.0)	2.2 (1.6 to 2.8)	2211
1993	13.0 (9.7 to 16.3)	2.8 (1.2 to 4.4)	393	14.1 (12.5 to 15.7)	3.5 (2.7 to 4.4)	1840
1994	16.9 (14.4 to 19.3)	4.2 (2.9 to 5.5)	932	14.2 (13.2 to 15.2)	3.7 (3.2 to 4.2)	4679
1995				13.3 (11.8 to 14.9)	4.3 (3.4 to 5.2)	1934
1996	16.9 (15.0 to 18.7)	4.6 (3.6 to 5.7)	1582	15.1 (13.4 to 16.8)	4.9 (3.8 to 5.8)	1754
1997	16.9 (14.5 to 19.2)	5.3 (3.9 to 6.7)	985	17.8 (16.4 to 19.1)	4.9 (4.1 to 5.6)	2958
1998				18.6 (16.4 to 20.8)	5.0 (3.8 to 6.2)	1216
1999				16.9 (14.8 to 19.0)	5.1 (3.8 to 6.3)	1204
2000	22.2 (20.9 to 23.5)	7.6 (6.8 to 8.5)	3867	17.5 (15.9 to 19.0)	5.7 (4.8 to 6.7)	2201

Figure 9: Prevalence of obesity in East and West Germany, 1991–2000, hyperpercentage of population (Apfelbacher et al., 2008)

In addition, market growth in Germany supported this change of perception with a growth of the fitness industry's revenue from 0.8 billion Euro in 1990 to 3.2 billion Euro in 2001. German consumers spent approximately 1.8 billion Euro on natural food products, and an additional 400 million Euro on vitamin supplements in 2002. In summary, the German consumers spent 38 billion Euro on wellness holidays, sport activities, natural food products and vitamin supplements in 2000. Furthermore, between 1992 and 2002 beer consumption fell from on average from 146 to 126 litres per annum (p.a.), while consumption of mineral water grew from 86 to 109 litres p.a. Overall, the consumption of non-alcoholic beverages went down to an average 50 from 256 litres p.a. in ten years (Welt, 2002). Although the Bionade Corporation clearly created a new market segment with the invention of a healthy fermented soft drink, its introduction actually took place in a changing social environment, and thus played a part in changing consumer perceptions. This changing environment was not limited to Germany, but was a global phenomenon that enabled the company to spread into other markets abroad. The global wellness industry's market share in 2010 is itemised by trade in Figure 10.

³³ See also the case study of Howarth, Forster and Dorrer (2004) for the social representations of obesity presented on pages 86-87.

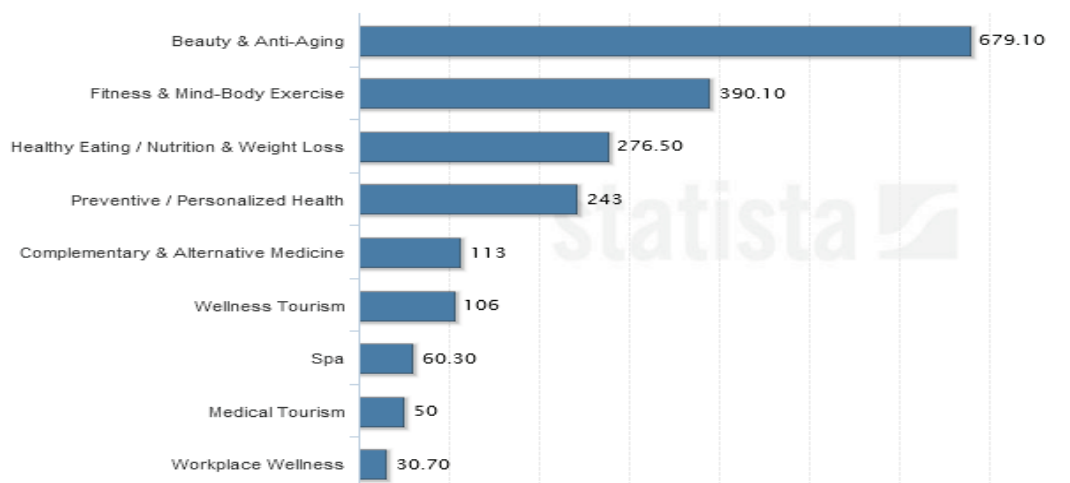


Figure 10: (Estimated global market size of the wellness industry cluster in 2010 (in billion U.S. Dollars), 2009)

In order to be successful overseas, the Bionade Corporation had to adjust its products to tastes and preferences contained within specific social representations, for instance a cranberry flavour for the U.S. American market (Treumann, 2007). This further suggests that the importance of underlying social representations has to be considered in order to understand the emergence of consumer preferences.

An important question to be answered is why and how the wellness industry was able to grow in the first place. Friedl (2006) identifies six social and cultural triggers for the success of wellness trends in social representations. First, he observed a growing individualisation as a “consequence of a differentiation process of a society of specialists” in which “economic developments” contribute to the “disentanglement of the individual from the usual social community” (Friedl, 2006, p. 5). Second, he pinpoints the increasing life expectancy in industrialised Western countries, and the shift in the demographic formation of societies. Third, he cites the emancipation of women and in particular the effect on job markets the resultant increase of women in the workforce had. The perceptions of what and when to consume changed with an increasing number of women in leading political and business positions and, according to Popcorn and Marigold (2000), a differing female health awareness. Fourth, Friedl (2006) recognises growing personal spiritualisation as a result of secularism and the decline of organised religious institutions³⁴. Friedl (2006) describes the consequence of this process as a spiritual vacuum that evokes the demand for new and alternative sense-making systems or, in terms of this thesis, social representations. Fifth, Friedl (2006)

³⁴ The change of religious social representations can be found in the case studies by Wagner et al. (1999; 2000) mentioned in the theoretical synthesis on pages 85-86.

names changes of work-life balance in a post-industrialised society, such as increased project and contract work, the decreasing identification of employees with their companies, short working contracts and increasing psychological pressure, as reason for the success of wellness trends. Finally, the consumer recognition of the value of health, displaced earlier consumer values such as protection of nature, fun and entertainment (Friedl, 2006). All these points triggered a change in the social representations necessary for a success of Bionade.

By referring back to Scherer's (2005) definition of consumer preferences as “relatively stable evaluative judgements in the sense of liking or disliking a stimulus” (p. 703) and the theoretical synthesis in general, it is evident that the developments described above define social representations as bearers of particular values that enable individuals to make those evaluative judgements about the stimulus, in this case the brand Bionade. The interview revealed that Bionade Corporation is fully aware of the connection between the brand and the health and sustainability trends in German society, and their reciprocity (Bionade, 2012). The stimulus, here the values represented by the brand, is not only defined by the company itself but also determined by consumer expectations based on their underlying social representations.

The philosophical alignment with those shared values can be identified in projects supported by the company. The complexity and diversity of social representations, as a collective pool of social knowledge, make it necessary to frame the stimulus beyond the simple presentation of a healthy soft-drink. As result, the Bionade Corporation always supports sport events, especially for children, and local sustainability projects such as a drinking water reforestation projects, organic farming in the region or youth training for the Olympics (Bionade, 2012).

Furthermore, the brand itself did and does not only interact in a bilateral way with social representations. It also became part of them due to technical innovation and the creation of a new market segment. As stated in the interview, one of the influences on the market is that Bionade plays an exemplary role, i.e. as a reference or reflection of positive judgements in the sense of Scherer (2005), for other companies entering the same market (Bionade, 2012). Therefore, the Bionade stimulus must be understood as symbolism (Dolfsma, 2004), and its underlying idealistic values represented by the brand as described by former owner Peter Kowalsky (Treumann, 2007). Burger (2012) further demonstrates the impact of company policies on evaluative judgements driven by underlying social representations by explaining that some consumers were

dissatisfied when company shares were bought by Dr. Oetker, via the Radeberger Gruppe, in 2008. Although Dr. Oetker had a good reputation for quality, this did not necessarily extend to organic and/or natural production, and the company lost its appeal of small family-owned businesses; thus, certain evaluative judgements were no longer positive (Burger, 2012).

Initial low sales in the first five years forced the Bionade Corporation to initiated a new marketing strategy, implemented by marketing expert Wolfgang Blum in 1999/2000 with a “radical makeover—a slick retro blue, white and red logo, and a new strategy, branding it as a hip lifestyle drink that happened to be healthy” (Treumann, 2007, p. n.a.). This symbolism of good health evoked by the new label helped customers identify with the brand³⁵.

The city of Hamburg was chosen as the first major distribution centre, because the Bionade Corporation identified the city as a place of opinion-makers, due to its high concentration of marketing and advertising professionals. Wolfgang Blum, the Bionade Corporation marketing expert, himself worked there and was therefore familiar with this environment. Such professionals are curious and communicative, keen to try something new (Bionade, 2012). Thus, the strategy was focused on word-of-mouth advertising or viral marketing, summarised by Scott (2011) as “creating a world wide rave [in this case starting in Germany] by having others tell your story for you” (p. 109), instead of other expensive marketing instruments. The new Bionade product was presented at specific locations, namely bars, nightclubs and at events, where those opinion makers spent their spare time. The idea of this strategy was to put the product into the hands of those people and let them spread the idealistic values of the brand (Bionade, 2012). This is how the Bionade Corporation developed the brand's symbolism (Dolfsma, 2004) as a combination of a lifestyle product, and a as biological, healthy product.

It is possible to define Hamburg as a geographic location (Figure 8) of concentrated initial hubs for lines of flight (Deleuze & Guattari, 1987), due to the communicatively shared self-conception as derivation of social conversion. The city, and the locations indicated above, can be seen as a positive analogue to the case study about Brixton presented by Howarth (2002)³⁶. In this case, however, Hamburg and its bars and nightclubs are not part of social representations used to separate one's own identification from this social environment. Being a Hamburger is not necessarily a negative identification; quite a few people understand it as a positive feature to live in this city. It

35 Famous examples are the NZ fern, the McDonald's 'M', Apple, Shell and so forth.

36 See pages 89-90.

is reasonable to assume that individuals pursue such positive identification characteristics rather than negative ones, because “we try to find among the beliefs available in our community some that will serve us in achieving our desires and avoiding the pains we fear” (Lemke, 2008, p. 27). As said before, Lemke (2008) emphasises that identification is mostly driven by desires and fears, which he defines as “subsistence needs, affordances for pleasure, and vulnerabilities to pain” (p. 18). The question at hand is the possibility to adopt Deleuze and Guattari's (2004 [1972]) terminology regarding *desires*, too. Lemke (2008) adds to the “primordial desires and fears” also the “additional desires and fears which our cultural worlds elaborate” (p. 27); these additional desires and fears are identical to the desires defined by Deleuze and Guattari (2004 [1972]). Therefore, the identification as Hamburger, including the many sub-cultures of such a city, fulfils desirable characteristics for one's own identity.

Furthermore, the environment of opinion and trend-makers in Hamburg, certainly an identity-endowing term in the sense of Lemke (2008), should also be understood as the “self-vibrating region[s] of intensities” as Deleuze and Guattari (1987, p. 22) identify plateaus. Hamburg, amongst other cities, belongs to a certain representation of communicative intensities as indicated by the Bionade Corporation's use of the city as a product launch platform (Bionade, 2012). Interestingly, the nature of the rigid lines and primitive segmentarities in this rhizomatic plateau, the institutions of those occupational sectors and the relating social representations, initiate the reorganisation of social communication known as lines of flight³⁷. Bionade executives' awareness of the product's marketing potential allowed them to proactively and cheaply introduce Bionade into lines of flight, that in turn serve as creators and developers of social representations defining wellness and fitness within the consumer identity. The Bionade marketing strategy led to development of a rhizome in which word of mouth was accompanied by TV coverage in the controversial German series *Galileo*³⁸, in 2006 (Bionade, 2012). This is a popular science show dealing mostly with social knowledge³⁹ as defined by Moscovici (1998) and therefore a promoter of social representations. Extra media coverage resulted in a wider distribution within the social communicative rhizome, because the media represents well established rigid lines and primitive segmentarities in modern societies (Deleuze & Guattari, 1987). In addition, the Bionade

37 For the detailed explanation of the three types of social lines in Deleuze and Guattari (1987) see pages 67-70.

38 Several remarks about the journalistic quality were made by, for instance, Becker (2006) and Mittelstaedt (2012).

39 See the differentiation between social and scientific knowledge on page 82.

Corporation joined social media networks to produce further consumer communications on the internet, another rhizomatic network⁴⁰.

The final question is whether or not “relatively stable evaluative judgements” (Scherer, 2005, p. 703) are positive or negative towards the idealistic Bionade stimulus of the Bionade Corporation. The underlying social representations evolve in a complex rhizomatic process involving habitualisation, typification and justification of roles. As common knowledge systems, they allow individuals to adopt identities bearing social status and value systems. Those value systems then define what is desirable. In terms of the “health-conscious consumer” (D. G. Smith, 2007, p. n.a.), Bionade is desirable because the underlying value systems are positively stimulated, partly intended due to the described communicative social reciprocity.

Figure 11 on the following page presents a time scale flow chart of the described relationships between the underlying social representations, the historic events and the Bionade Corporation. The company dimension in yellow is on the left-hand side and the black arrows indicate the relationships within this dimension. In the centre, social representations are presented in orange, and on the right-hand side influential historic events are shown. The five boxes in salmon colour contain the six triggers mentioned by Friedl (2006).

The other coloured boxes are mostly self-explanatory; changes in the legislative dimension are in red, additional trends and inventions in green, marketing research in turquoise and the market for natural beverages as well as the related competition in violet. As above, arrows indicate the relationships between each box. Here, black is used within the company dimension, red is for the relationships between company dimension and the other two dimensions. Blue arrows indicate the relationships between social representations and the additional historic events, green shows the relationships in the historic dimension, and finally, the yellow dashed lines indicate strong correlations between different relationship arrows.

40 See discussion about the internet as rhizome on pages 62-64.

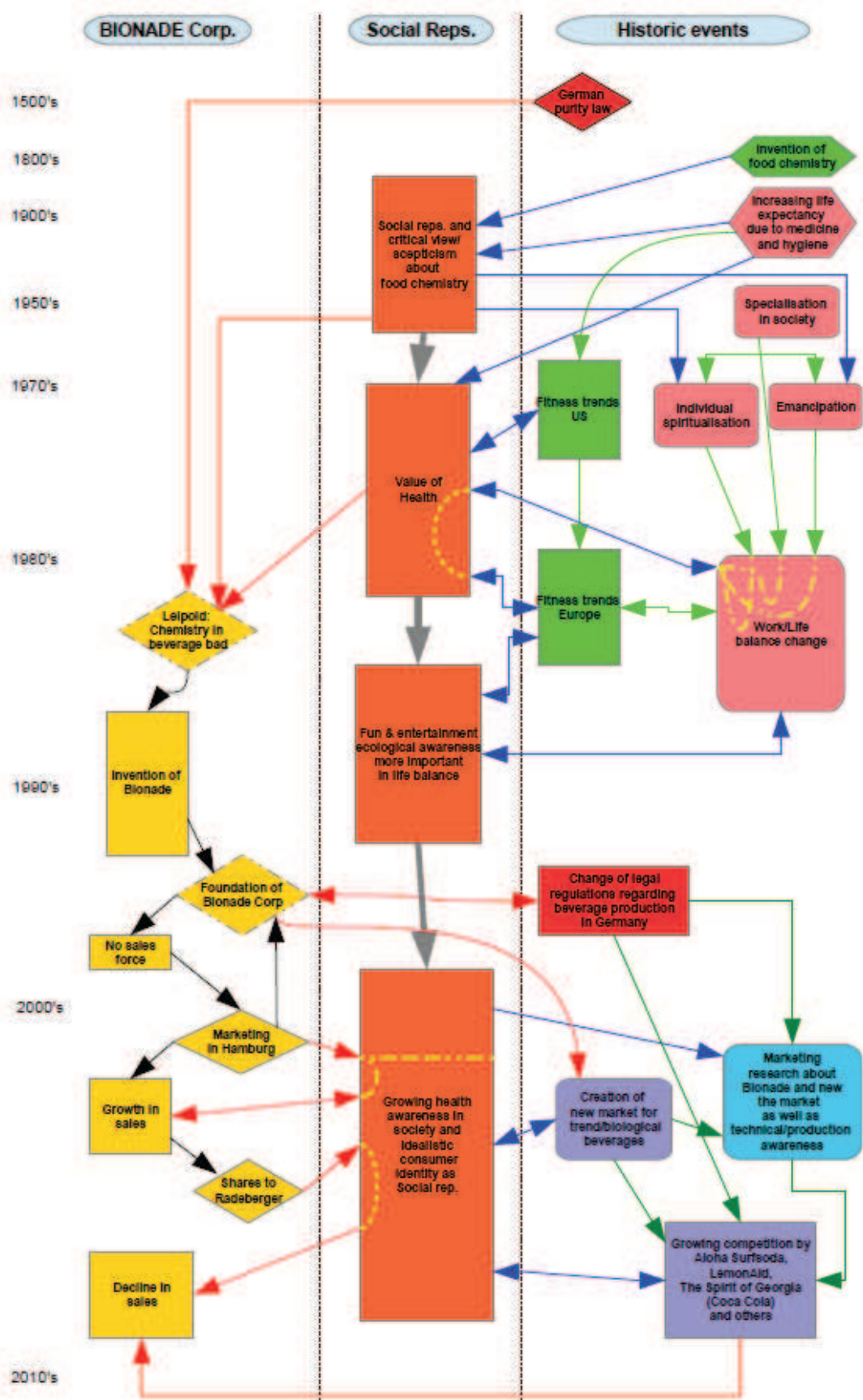


Figure 11: Flow chart illustrating the relationships between the Bionade Corporation, social representations and historic events.

4.3 Synopsis

The argument made in the first part of this chapter was that a case study can be used to justify the propositions made in a hypothesis. In this thesis, I argue that the Bionade case study supports the theoretical synthesis that an understanding of underlying social representations, their evolution and their communication, is necessary prior to analysing why a specific good or service is preferred by consumers. Contrary to mainstream economic assumptions, consumption preferences can only be understood as product of social interaction.

It must be said, that the presented case about the Bionade Corporation lacks the social meaning and depth compared to the case of pop music in the Netherlands presented by Dolfsma (2004). In my hypothesis, I have argued that the intensity to which stimuli are evaluated depends on the way these stimuli satisfy underlying desires, lines of flights or how they fit into primitive/rigid lines (Deleuze & Guattari, 1987)⁴¹. This also determines the social impact of the stimulus, which for pop music much more extensive than with Bionade. However, the Bionade case shows communicative reciprocity, through symbolic meaning and attested brand values, between company and society. This communicative reciprocity exists, despite the fact that the Bionade Corporation says its direct level of communication with costumers is reserved (Bionade, 2012). Yet, my conclusions are mostly in agreement with the arguments presented in the literature review⁴². In short, for an adequate “development of useful theory” (Denzau & North, 1994, p. 27) on consumption preferences, behaviour-inducing dynamics in societies need to be examined first. Therefore, the presented Bionade case study supports my hypothesis, albeit without extensive longitudinal studies of social representations, which unfortunately go beyond the scope of this thesis.

41 See pages 67-70.

42 See pages 41-44.

5. Conclusion

This final chapter reflects on the goal of this study, which was to answer the following research question:

Does verbal and non-verbal communication between individuals and their social groups, illustrated by the theory of rhizomes (Deleuze & Guattari, 1987), generate and change consumption preferences through social representation (Moscovici, 1988, 1994, 1998) within an institutional framework based on the model of social construction (Berger & Luckmann, 1966)? If so, how does the process work?

In chapter two, the literature review, the foundation for this thesis was laid on the basis of a comprehensive review of mainstream economic theory and its critics. Critical literature presents substantial arguments for a redefinition of economic theory, with a focus on consumer preferences, because current theory is based on flawed presumptions. In particular, critiques highlight that human beings are not behaving according to underlying rationality assumptions, and that the influence of social environments on economic behaviour in standard theory has been neglected. These arguments serve as a justification for inclusion of social interactions in economic theory. Without the addition of social interactions, it remains impossible, as stated by Denzau and North (1994) to develop “useful theory” (p. 27). Other literature underpins this conclusion, especially the case studies conducted by Friedman (1990) and Dolfsma (2004) that strongly support the claim that consumption preferences are a “result of internalized external ideas” (Wunder, 2007, p. 836) manifesting themselves as “means of expression and communication” (Dolfsma, 2004, p. 38). The literature also supports the idea that consumption preferences should “be understood as constituent of selfhood, of social identity” (J. Friedman, 1990, p. 327). Finally, the awareness of the complexity of social interaction, and the embodied communication therein, motivated the selection of the underlying theoretical frameworks mentioned in the research question. In reference to the realisation by Watzlawick, Jackson and Beaver (1967) that there is no real antagonism⁴³ to communicative actions in social environments, and therefore in markets too, I have highlighted the importance of human communication in relation to consumer preferences.

43 Their argument that 'one cannot not communicate' is discussed on pages 40-41.

Chapter three, the theoretical synthesis in which frameworks are combined and explained, represents the centrepiece of this thesis. Due to the conceptual distance of this synthesis from mainstream economic theory, chapter three begins with epistemological notes that explore complexity and thereby illustrate the scientific legitimacy of this synthesis.

The epistemological notes are divided into an ontological and a methodological justification. The former outlines the arguments of North (1993), England (1993) and Hodgson (1998a, 2006, 2007), and the necessity of acknowledging “the social settings of economic behaviour” (Heilbroner & Milberg, 1995, p. 8). This requires different scientific methodologies and, in reference to Schumpeter (1987 [1954]) or Turk (2009), an ontological open-endedness in order to allow new, visionary research questions into the theoretical economics arena.

On the contrary, the methodological justification argues to some degree for a limitation of ontological open-endedness. The vision, as Schumpeter (1987 [1954]) calls it, can only be valid in theoretical discussions when its presumptions and hypotheses remain falsifiable, as defined by Popper (2002 [1935]). The methodological justification also focuses on Peirce's (1931) abductive reasoning⁴⁴. The epistemological sub-chapter is completed by a definition of complexity based mainly on the work of Ladyman, Lambert and Wiesner (2011), which supports this thesis because social interaction is complex by nature⁴⁵.

The epistemological notes are then followed by the presentation of all three theoretical frameworks, namely the rhizome by Deleuze and Guattari (1987), the social construction of reality by Berger and Luckmann (1966) and social representations by Moscovici (1988, 1994, 1998). For each of the frameworks primary and secondary definitions are given and then illustrated and supported with real life examples, related research studies, and comparisons with similar or identical contexts in existing pluralistic economic literature. Moreover, in the case of the rhizome, it is defined in detail according to the specific terminology of Deleuze and Guattari (1987, 2004 [1972]). A critical review of each framework is provided, too. Points of congruence are indicated in order to achieve a theoretical, socio-economic synthesis.

At the end of chapter three, a synopsis draws together the theoretical synthesis between rhizomatic constructed social representations and consumption preferences defined as

44 See also Bush (1991) on pages 50-52.

45 The argument is part of the epistemological notes regarding complexity discussed in the theoretical synthesis on pages 52-55.

“relatively stable evaluative judgements in the sense of liking or disliking a stimulus” (Scherer, 2005, p. 703). The importance of created and provided identities is emphasised. Finally, the ways the social environment influences behaviour on an individual level, specifically in terms of consumer preferences, are delineated.

The fourth and last chapter is devoted to a case study about the German soft-drink company Bionade Corporation. This case study explores a well-known real-life case from the perspective of the theoretical synthesis, and identifies how the foundation of the Bionade Corporation, the invention of its product Bionade, and its success was accompanied and influenced by the development of certain social representations in German society. The Bionade analysis underlines the analytical power of the synthesis, and explains how consumption preferences are generated and evolve through complex social communication.

An additional methodological justification is given, specifically focused on the theoretical usefulness of case studies. It is argued that the case study support the theoretical synthesis and allows it to be further developed as per the abductive process described by Peirce (1931) and Bush (1991)⁴⁶. It is not the express of the Bionade case study to prove the synthesis right, especially when Popper's (2002 [1935]) fallibilism is applied to the case study. As a consequence, the suggested theoretical synthesis should be considered for further research to test its robustness. In particular, research about social representations offers useful insights for economic theory, yet, it requires time-consuming and comprehensive studies, and is therefore beyond the scope of this thesis.

In particular, an extensive analysis of constructed social representations and their evolution in Germany and other countries where the Bionade product is available could not be achieved in a Master's thesis, but requires an extensive empirical research project. However, based on the proposed synthesis, further research can be conducted later by those who are interested in applying the frameworks to this or other corporations.

It is arguable that the theoretical synthesis achieved by this thesis lacks predictability due to its open-endedness (N. Jackson & Carter, 2000; Lawley, 2005), especially when considering the rhizome. Furthermore, as shown by Sokal (1996) and Sokal and Bricmont (1999), the ontological open-endedness of the rhizome, originating from modern French post-structuralism and its distinct vocabulary, can lead to scientific

46 See pages 50-52.

nonsense, and thus this thesis is also open to that kind of critique to a certain extent⁴⁷. Likewise, the constructivism behind the social construction of reality (Berger & Luckmann, 1966) and social representations (Moscovici, 1988, 1994, 1998) is open to critique from the standpoint of other philosophical paradigms. Moreover, the epistemological remarks, and the arguments for ontological open-endedness in the face of a methodological fallibilism, can both be rejected as insufficient or unfeasible from the standpoint of the underlying philosophy of mainstream economic science.

Indeed, one can disapprove of the theoretical synthesis based these objections. However, a discussion about the underlying philosophy of science paradigms, for instance constructivism, critical realism, and positivism, is limited in scope. A more in-depth survey can become the subject of future research. Finally, the intrinsic processes of preference formation were mostly treated superficially in this thesis. This could be interpreted as another limitation. However, the focus of this thesis lies in the socio-psychosocial aspects of economic behaviour and not individual psychology, in an attempt to answer how social influences are processed by the human mind. I illustrate some aspects of a psychological view of human behaviour, mostly rationality and decision making, but intentionally avoided an in-depth discussion of the psychology of the human being.

I believe the suggested theoretical synthesis offers valuable insights into complex social mechanisms behind economic behaviour, in particular the emergence of and change of consumer preferences. The synthesis underlines and extends what Dolfsma (2004) concludes from his case study about pop music in the Netherlands, and what Friedman (1990) finds regarding the *La Sape* movement in Africa. Moreover, it brings the researcher closer to the requirements for economists drawing on the rather humorous quote by George L. S. Shackle (1904-1992) used as an opening line in the introduction. Therefore, this theoretical synthesis and its underlying framework can become the basis for a pluralistic approach to economic science in the future.

⁴⁷ The argument made by them can be found on pages 69-71.

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Appendix 1 – Participant information sheet

Participant Information Sheet



Date Information Sheet Produced:

31/07/2012

Project Title

The role of human communication and social processes in the generation of consumption preferences (Working title)

An Invitation

My name is Imko Meyenburg and I am an international postgraduate student from Germany studying at the Auckland University of Technology, New Zealand. In order to obtain my Master's in business degree, with a major in economics, I am currently writing a Master's thesis with an evolutionary and institutional economic background. My topic is about the advent of consumption preferences due to communication processes in social groups and institutions. The aim of my research is to formulate a new theoretical perspective of human consumption preferences based on complex social processes and behaviour. For this purpose, I will design a case study about your company and the soft drink Bionade. For this purpose, I invite you to participate in an interview which will help me to design the case study and to achieve my research goals. I ensure you that your participation is voluntary and that you have the right to withdraw at any time or to withhold any information or statements you consider as being against your interests.

What is the purpose of this research?

The main purpose of this research is to obtain a Master's of business degree at the Auckland University of Technology, New Zealand. Furthermore, the purpose of the research is to make a theoretical contribution to the field of Evolutionary and Institutional Economics, which shall lead to a further research in that field. Finally,

some or all of the research findings may be published in journals or presented at conferences. Only the company shall be named, not individuals

How was I identified and why am I being invited to participate in this research?

Since the case study is specifically designed around the Bionade soft drink and the company, the company has been contacted and interviews requested. As official representative of the company, you have agreed to participate in the interview.

What will happen in this research?

You will take part in a semi-structured interview, which will examine the history of the company, the relationship with its costumers, and the marketing methods used to communicate the image of the soft drink of the company, always in regard to the socio-cultural environment.

What are the discomforts and risks?

Due to the interview design, there are no discomforts and risks expected for the participant. The interview questions do not contain anything which obliges the participant to present confidential information belonging to the company, or private information.

Furthermore, it is intended that the case study design will contain only the name of the organisation and not the name of the participants. However, a formal request to name participants is included within the Consent Form in case it is unavoidable to do so. If the individual agrees, they will be notified prior to being named. The participant has the right to withdraw their name at any time before the research findings are published.

How will these discomforts and risks be mitigated?

The interview questions are designed to fully avoid discomfort or risks for the participant. However, the participant can withdraw from the interview at any time when discomforts or risks arise.

What are the benefits?

There are no practical benefits expected for the participant. The benefits of the research are limited to the professional development of the researcher Imko Meyenburg and a

contribution towards the field of Evolutionary and Institutional Economics as described above.

How will my privacy be protected?

In order to protect the participant's privacy interview transcripts and recordings will be handled confidentially as described in the Auckland University of Technology Ethics Committee guidelines and will not be available to third parties. Transcripts and recordings will be stored on secured hard drives and storage devices with limited access. Furthermore, case study design ensures participants' remains anonymity.

What are the costs of participating in this research?

There are no costs related to participation in this research. However, the interview will require approximately one to two hours of the participant's time. Furthermore, if requested the participant will be provided with an electronic summary of the research findings.

What opportunity do I have to consider this invitation?

The participant will be given two weeks to consider this invitation. Either an agreement or disagreement of is requested.

How do I agree to participate in this research?

The participant will receive a Consent Form which will be required to be signed in order to give his or her agreement to the interview and the use of it for the research.

Will I receive feedback on the results of this research?

If desired, the participant will receive an electronic copy of the case study. The provision of an electronic copy of the complete thesis is not intended but is open for negotiation. Any request for a hardcopy will incur for related costs.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisors, Dr. Stefan Kesting, stefan.kesting@aut.ac.nz, +64 9 921

9999 ext. 5753 and Dr. Gail Pacheco, gail.pacheco@aut.ac.nz, +64 9 921 9999 ext: 5708

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTECH, Dr Rosemary Godbold, rosemary.godbold@aut.ac.nz , 64 921 9999

Whom do I contact for further information about this research?

Researcher Contact Details:

Imko Meyenburg, i.t.m@gmx.de or imko.meyenburg@aut.ac.nz,

Project Supervisor Contact Details:

Dr. Stefan Kesting, stefan.kesting@aut.ac.nz, +64 9 921 9999 ext. 5753 and Dr. Gail Pacheco, gail.pacheco@aut.ac.nz, +64 9 921 9999 ext: 5708, AUT School of Business, Faculty of Business and Law, 42 Wakefield Street, Auckland 1142, New Zealand.

Approved by the Auckland University of Technology Ethics Committee on 26 July 2012, AUTECH Reference number 12/143.

Appendix 2 – Consent form

Consent Form



Project title: ***The role of human communication and social processes in the generation of consumption preferences (Working title)***

Project Supervisors: ***Dr. Stefan Kesting and Dr. Gail Pacheco***

Researcher: ***Imko Meyenburg***

- I have read and understood the information provided about this research project in the Information Sheet dated _____.
- I have had an opportunity to ask questions and to have them answered.
- I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- If I withdraw, I understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed.
- I agree to take part in this research on behalf of the Bionade GmbH.
- I agree to my name being published in the research findings.
- I wish to receive a copy of the research report (please tick one): Yes No

Participant's signature:

.....

Participant's name:

.....
Participant's contact details (if appropriate):

.....
.....
.....
.....

Date:

***Approved by the Auckland University of Technology Ethics Committee on July 26,
2012 AUTEK Reference number 12/143***

Note: The Participant should retain a copy of this form.

Appendix 3 – Interview questions

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The development

What were the motivation and reasons for the development of the soft drink Bionade? Please also consider any social, historical, technical or economic aspects which might be pertinent.

Could you give me a brief history of the company and the brand?

The marketing campaign

What was the reason for the marketing campaign in 2000?

Could you describe the process of choosing marketing in order to communicate/position the brand on the market in 2000?

How would you describe the target groups' consumer culture in general, including lifestyle, interests, social settings and so on.

Had this an influence on the marketing strategies?

The brand identity

Why did Bionade became so unique and desirable compared with other products on the market? What influences did the marketing strategies have?

Could you describe the public perception of Bionade and how the image of the brand is defined?

How would you describe the communicational relationship between the company and its customers?

Could you describe the influence of Bionade on target groups, the general consumer culture and the market of soft drinks?

⁴⁸ As a result of this semi-structured interview, questions may have changed or have been added to the actual interview.