

2. Methodology and cognitive approach of the research endeavor

Research should choose philosophy of science as an orientation framework for building and testing models and insights (Kornmeier 2007; Chmielewicz 1994). This chapter will illustrate which view is taken in this research study. First, the choice of the epistemological concept will be presented. The theoretical concepts of Logical Empiricism (c.f. e.g., Schlick 1918) versus Critical Rationalism (Popper 2005; 1959) and Radical Constructivism (Glaserfeld 1997; 1987) versus Naïve and Scientific Realism (c.f. e.g., Hartmann 1966), as well as Pattern Predictions (Hayek 2007; 1964) will be briefly portrayed and the choice of approaches for this study will be selected. Then, the applied paradigm will be presented, after portraying the paradigms Radical Humanist, Radical Structuralist, Interpretive and Functionalist (Burrell & Morgan 1979). Finally the unit of analysis focused in this study will be illustrated.

2.1 Epistemological approach

According to Popper (2005; 1959), the aim of science is to find satisfying explanations to everything that we think it needs one. This aim structures the research activities. As a first thing, the research area has to be described precisely. Then boundary conditions, determining factors and hypotheses, which help to describe the research are to be identified and transferred into a theoretical model that describes the complex reality. In a last step, this model has to be proven with empirical tests. Building on this approach, Popper developed the fundamental orientation system of the *Critical Rationalism*. It is based on the falsification principle, which states, that empirical proof can never lead to ultimate verification of a hypothesis but only to potential falsification and hence suggests a deductive approach and preliminary validity. While the falsification of a hypothesis, for example through a refuting case, is ultimate, the verification generally can only be preliminary. It can be regarded preliminarily valid, as long as no falsification could be achieved. Therefore, researchers are called to formulate their hypotheses falsifiable (Popper 2005; 1959; Chmielewicz 1994; Kornmeier 2007). The Critical Rationalism in social sciences and economics is challenged by scientists for various reasons (Luhmann 1990; Deshpande 1983; Kubicek 1975). Critics argue, that in reality it is not possible to certainly falsify a hypothesis without any doubt due to the vast number of influence factors (Deshpande 1983; Kubicek 1975; Vollhardt 2007). Others criticize that too

many exciting research findings are seen as established, even though they are just out of the printing press (Luhmann 1990).

An opposing view to Critical Rationalism is represented by *Logical Empiricism* (c.f. e.g., Schlick 1918; Kornmeier 2007). Empiricism generally bases on the thought that the perception and experience is the primary source of human knowledge. Scientific theories summarize the insights from these experiences. Induction gains a particular importance in this field. According to Empiricism, researchers should aim to find general principles from a limited number of observations (Kornmeier 2007). This pure form of Empiricism is widely declined, as critics argue, that any number of singular observations can never derive and justify a generally valid principle (Chmielewicz 1994; Kornmeier 2007). An enhancement of the general view leads to the concept of *Logical Empiricism* (also Logical Positivism) (c.f. e.g., Schlick 1918 and other members of the “Vienna Circle”/“Wiener Kreis”; Kornmeier 2007). Here, additionally to the importance of empirical observations, the role of human consciousness in structuring observations and deriving causalities and rules is included (Kornmeier 2007).

Another dimension of epistemological approaches deals with the question of the existence of an objective reality (Kornmeier 2007). Supporters of the school of thought of *Radical Constructivism* (Glaserfeld 1997; 1987) reject the possibility of formulating universal regularities strictly in general. Supporters of this view argue that perception is always just a subjective construct of senses and cognitive processing, built in consciousness and can never match reality. Hence, every perception and therefore every aspect of reality is completely subjective. Knowledge can therefore not be seen as a metaphysic concept describing reality, but instead solely as a practical tool, that has to be judged by its usefulness (Glaserfeld 1997; 1987; Luhmann 1990; Kornmeier 2007; Chmielewicz 1994). Developed theories are rather useful fictions than reality (Kornmeier 2007).

The concept of *Realism* takes an opposing view and argues that an objective reality does exist and can be, at least in major parts, recognized through perception and thought (Kornmeier 2007). In its most radical form, the *Naïve Realism*, distortion of perception is generally refused and instead it is assumed that reality is just like it appears to the observer (Bauer 2010). A more realistic view is represented by *Scientific* or *Critical Realism* (c.f. e.g., Hartmann 1966). Here, it is assumed that an objective reality does indeed exist, however it is usually not directly observable for human perception. Researchers can nevertheless make it

accessible to them by direct or indirect perception and cognitive processing (Hartmann 1966). The concept of Scientific Realism suggests that testing a hypothesis in reality can be achieved, even though the results do not imply universal truth. However, they can be seen as a hint to the existence of a certain connection and through repetition of empirical evidence, it allows a step-by-step approximation to the truth. However, the absolutely certain truth cannot be reached (Hunt 1994; Greenwood 1989; Leplin 1981; Kornmeier 2007; Vollhardt 2007).

The epistemological concepts described above are extreme points of views and border a spectrum of approaches in between. Such an approach is the concept of pattern predictions (Hayek 2007; 1964). It represents a rather pragmatic view, taking the realistic boundaries of complex phenomena into account. Hayek argues that the source of scientific inquiry is impelled by wonder and by need of mankind. He considers wonder as a driver as more fruitful, because it implies an already underlying question, which helps to structure research in a complex and chaotic environment. Due to the degrees of complexity and incomplete data, precise explanations, especially quantitative predictions are to be considered methodologically problematic. Scientific research should therefore rather focus on finding general principles of patterns to explain causal chains (Hayek 1964; Hayek 2007; Paqué 1990).

This research study bases on a set of hypotheses aiming for preliminary validation and could hence principally follow the epistemological approach of Popper's Critical Rationalism. However, the research on fear of entrepreneurial failure and the role of fear is not yet deeply understood. It is a complex matter, as it includes emotions, as a subjective explanandum. Due to this, this research endeavor will require – at least in parts – an inductive approach, which will be based on empirical observations. Therefore, this study will apply the thoughts of logical empiricism, while being aware of the criticism of rationalism, that the generated hypotheses can only be preliminarily valid and have to withstand attempts of falsification. The orientation of this work will tend towards Constructivism, rather than Scientific Realism, mainly due to the subjectivity of the explanandum, and therefore the generated knowledge will be seen rather as a useful practical tool than objective reality. However, this study will not take a radical view according to this orientation either.

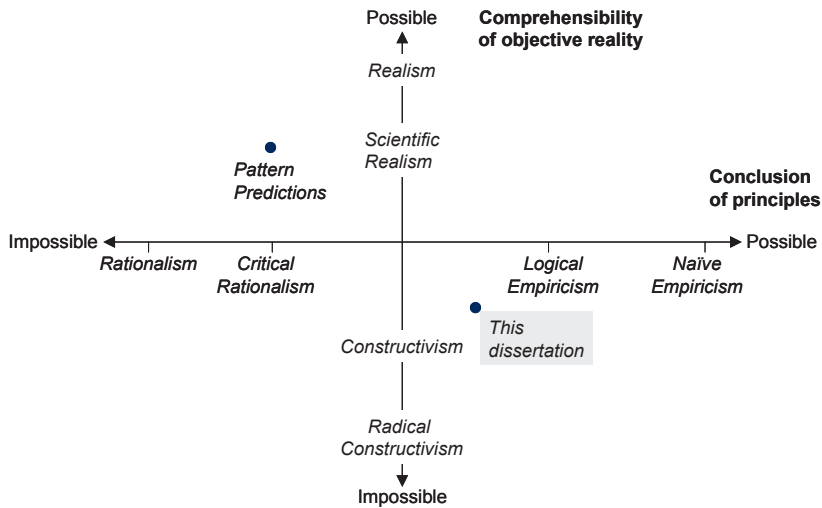


Fig. 2: Categorization of dissertation in (simplified) illustration of major epistemological views

2.2 Sociological Paradigm

The development of social theories is based on different underlying paradigms, determining the view on the world. Burrell and Morgan (1979) created a taxonomy of organization theories, that is widely used to classify the underlying paradigms in today's research. They categorize the different clusters into a 2x2 matrix with two dimensions. The first dimension differentiates between a subjective of objective interpretation view. Ontologically, nominalism reflects a position of subjectivism, whereas realism reflects objectivism (Burrell & Morgan 1979; Freiling et al. 2008). The second contrasts the sociological dimension of regulation and radical change. The earlier assumes organizational structures, which determine or at least influence an individual's behavior. The latter sees society in a constant situation of change and crisis (Burrell & Morgan 1979). According to these two dimensions, four diametral paradigms can be derived. The view of the *Functionalist* is defined by a subjective view in a regulated society. It is a common paradigm used as well in academia as in business, especially in business studies and organization theories (Burrell & Morgan 1979). Supporters claim, that there is a science of society, which can be investigated just like laws in natural sciences, by applying "models and methods of natural sciences to study human affairs" (Burrell & Morgan 1979). Scientific methods like empirical observations and derivation of causalities are

accepted as legitimate scientific approaches. The paradigm assumes rational observers, who can draw the same objective conclusions of observed circumstances. The social context is seen as generally regulated. Change can happen, but the subjects of investigation are acting within and hence are restricted by a certain organization and environment and a given historicity of prior events and decisions. The *Interpretive* paradigm bases on a subjective interpretation in a regulated society. It suggests that observations and expressions are subjective, but however through exchange, a shared reality can be created by the human mind (Burrell & Morgan 1979). "It seeks explanation within the realm of individual consciousness and subjectivity" (Burrell & Morgan 1979) and views knowledge to come from human experience. In research, the observer has to be seen both as subject and object of investigation (Burrell & Morgan 1979). Subjectivism implies certain methodological consequences, for example the tendency towards qualitative research, to capture the full nature and characteristics of the investigated entity (Freiling et al. 2008). The sociology is generally characterized as regulated, just like in the functionalist's view (Burrell & Morgan 1979), however uncertainty and innovation can be included in the paradigm, to enable the view that individuals or firms can shape their environment to a certain extent (Freiling 2009b). The paradigm of the *Radical Structuralist* goes back to Karl Marx (1818-1883) and follows an objective view, just like the functionalist does, but with the difference that society is seen as not stable and radical changes are possible. It is committed to concepts of conflict, emancipation, domination, etc. (Burrell & Morgan 1979). In the context of entrepreneurship, innovation can be seen as a source of change and potentially radical disruption of the established social order. The *Radical Humanist* paradigm fosters the subjective interpretation in sociology of radical change. It focuses on human consciousness and regards visions and ideas as source of change. This school of thought goes back to the roots of Hegel (1770-1831) and Kant (1724-1804) (Burrell & Morgan 1979).

It is not easy to sharply assign this research study to a paradigm cluster, as it takes a very mild view in both of the two dimensions.

It falls into the category of the interpretive paradigm in a mild form. It accepts the role of subjective matters, like feelings and emotions, and builds on theories from subjective interpretations, like the Competence-based Theory of the Firm. However, the interpretation takes the objective approach into account and applies quantitative research methods and principles of natural sciences. Therefore, its position is subjective, but close to the border of objectivism.

According to the sociology, the study takes a mild position as well. It generally takes the view of a regulated society, but however accepts entrepreneurship as a source of change. Nevertheless, the entrepreneurial activity takes place in an established order as a basis, which sets certain restrictions and conditions. Individuals and firms are strongly influenced by their environmental context and historicity.

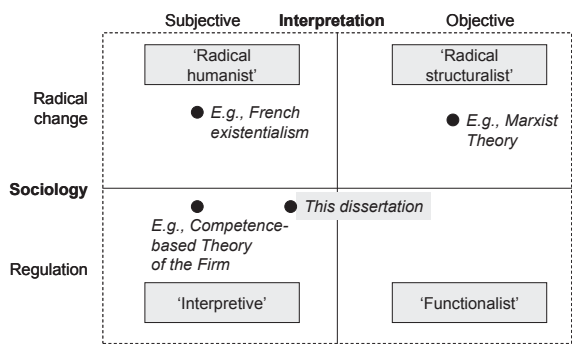


Fig. 3: Categorization of dissertation in overview of major sociological paradigms (based on Burrell & Morgan 1979)

2.3 Unit of analysis

The focus of this research is to identify which reasons hinder potential entrepreneurs from founding companies and which role the fear of failure and the perceived causes for this failure play as a reason. Goals of this research endeavor are to describe which individual characteristics of entrepreneurs are related to higher or lower perception of fear of failure, to the probability of actually founding a company and finally to making it successful. Therefore, this study mainly takes a business rather than an economics perspective. The focus within the area of business studies will be strongly on the individual person. Objective characteristics of individuals, like their education, as well as subjective characteristics, like their emotional state, will be investigated. Also the influence on the gestation and success of a venture will be examined from the perspective of the individual founder. When it comes to anticipated failure causes and the comparison to actual failure causes of companies, the study will employ a higher level of the research subject and will focus on the organization. Finally the study will conclude in a macro-economic outlook, reflecting on the generated insights, and a discussion of their application by policymakers.

The Role of Fear for Entrepreneurial Venture Creation
Causes of Failure before and after Foundation

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